MEDICAL AND SURGICAL REPORTER.

No. 2111. SATURDAY, AUGUST 21, 1897. VOL. LXXVII—No. 8.

ORIGINAL ARTICLES.

CONGENITAL MALFORMATIONS OF THE RECTUM, WITH THE REPORT OF A CURIOUS CASE.*

ELLWOOD R. KIRBY, M.D., PHILADELPHIA.

The rectum and its terminal apparatus, the anus, like other portions of the human anatomy, are liable to malformations and imperfections, the result of some extraordinary derangement of the acts of the plastic energies at some period during the evolution of the embryo.

Some of these vices of conformation are by no means uncommon; many of them are remediable, and as they generally admit of no delay in their treatment, a knowledge of all the medical and surgical measures which experience has decided to be best adapted to remedy each particular deformity, is of the utmost importance to every physician and accoucheur. No obstetrician should ever neglect the important duty of examining minutely every infant immediately after birth and for a day or two subsequently, to ascertain without doubt, the presence of an anal aperture, that the canal for some distance above is pervious, and that the parts perform their normal function.

As to the frequency, Collins found one case in 16,645 children born in the Rotunda at Dublin, and Lohrer, of Vienna, two cases in 50,000. The mortuary statistics of the city of Brooklyn from 1891 to 1895 show that during that time twenty-five children died within a few days after birth from complete congenital imperforation of rectum or anus. During this same period there were 90,180 births recorded, but it is the opinion of the registar that not more than half of the actual births are recorded. Accepting his estimate as correct, the proportion of cases would be one to every 7,200 births. Notwithstanding these statements, I am of the opinion that these malformations are of much more frequent occurrence than is generally conceded, and that many children born with such defects are suffered to perish for want of proper and timely surgical assistance, through either the neglect, ignorance, or mismanagement of midwives and monthly nurses.

With regard to the primary cause which determines these and other congenital vices, nothing of a definite character has as yet been ascertained, and the subject still remains a problem for future organologists to solve. There are some malformations which do not depend upon an arrest of development, but are the result of intra-uterine diseases. The narrowing and contraction of the anus, with more or less thickening of the integument, is the result of an anal inflammation. At times this may result from preternatural activity of the sphincter muscle. In such

* Read before the Philadelphia Pediatric Society, June 8, 1897.

cases the co-aptation from being purely spasmodic may gradually become organic and permanent. Peritonitis may occur during the life of the fetus, and giving rise to intestinal adhesions occasion malformations.

All deformities about the rectum may be conveniently arranged under seven headings:

1. Congenital narrowing of the anus or rectum, without complete occlusion. The anal aperture is at times preternaturally small either in consequence of a contraction of the lower end of the rectum, or from the fact that the skin may extend occasionally over the border of the anal margin. The outlet may be sufficiently large as to permit the meconium to drain away, or so small that the escape of excrementitious matter is impossible. The symptoms when prominent will be vomiting and abdominal distension, when slight some constipation and difficulty in voiding the feces.

The diagnosis is usually easy, for the contraction is near the anus and can be readily detected by the finger, or seen when due to a fold of skin extending across the anus.

The treatment consists in dividing the ring or skin on the dorsum and the use of daily dilatation either with the finger or soft rubber bougie.

2. Closure of the anus by a membranous diaphragm (atresia of the anus).

The membrane in these cases may be of greater or less firmness and thickness, and may be composed of skin or mucous membrane. It is sometimes so thin as to bulge with meconium when the child coughs or strains, and has been known to rupture spontaneously. This is the simplest of all forms of congenital malformations, but unfortunately the rarest.

It is easily diagnosed by simple inspection of the parts, and the treatment consists in making a crucial incision through the membrane.

3. Imperforate rectum.—In this class one may expect to find some of the most difficult cases of malformation, although some are comparatively simple. Instead of a normal anus the skin of the perineum extends across the anal region from side to side, and the rectum may terminate quite a distance from the normal site of the anus.

The intervening space may be made up of connective tissue, while a circular elevation or depression marks the normal site of the anus. Occasionally a distinct fibrous cord may be traced from the rectal pouch to the skin. If the rectal pouch be not at too great a distance from the skin a sense of fluctuation may be felt by firm pressure of one finger over the anus and the hand over the abdomen.

4. Imperforate rectum with a normal anus.—The septum which separates the anal and rectal pouches in these cases is generally within easy reach of the anus, and may be so thin as to permit a sense of fluctuation. In most cases, however, the septum is thick and composed of cellular or fibrous tissue, lined both above and below by mucous membrane. It may be perforated like the hymen and allow the slow dribbling of meconium. There may be also more than one septum. Voillemier reports a case in which the rectum was divided into four distinct compartments.

There is usually but little difficulty in the diagnosis of these cases, but the danger lies in the fact that the presence of a normal anus is apt to allay suspicion as to the true nature of the difficulty.

5. The anus may be absent and the rectum open at any point in the perineum or sacral region.

The lower portion of the rectum in these cases is usually of a fistulous character, lined by true mucous membrane, and the abnormal anus is always narrow and insufficient for its purpose. Occasionally the rectum terminates in two distinct openings, at a greater or less distance from each other.

6. The anus may be absent.—In this case the rectum may terminate in the bladder, urethra, or vagina. In the females the vaginal opening is the most common, in males the bladder opening is the most common. This condition is usually rapidly fatal unless relieved by prompt surgical interference.

7. As a final group the rectum or the large intestines may be entirely absent.

The case I wish to report was a child three days old that I saw in consultation with Dr. O'Malley. Nothing had escaped from the anus, the abdomen was greatly distended, and the child refused to nurse. An examination of the case showed a nor-

mal anus with a membranous diaphragm (atresia of the anus). There was no bulging, and nothing to indicate the presence of meconium above this membrane.

We divided this membrane by a crucial incision and the finger passed readily into the bowel. I thoroughly dilated this portion of the bowel and waited a few minutes to see if any of the meconium came away. Nothing came. This rather surprised me, and I again introduced my index finger, and discovered that the canal ended in a blind pouch. Careful palpation failed to reveal the rectal end of the pouch at three and one-half inches.

The question then arose as to the propriety of dissecting up the perineum and hunting for the rectal end of the pouch. But as we could not locate the upper pouch I did not think it proper to subject the child to the great dangers of an extensive resection of the sacrum.

As a last resort I finally did a Maydl's colostomy, and after a great deal of trouble succeeded in finding a portion of colon in front of the left kidney and stitched it to the abdominal incision. I opened the colon immediately and removed a large quantity of inspissated meconium. The child was then put to bed, freely stimulated, but only survived the operation 12 hours.

I was unable to map out the exact anatomical arrangement of the pouches through the very small abdominal incision. A post-mortem was refused. As to the general treatment of these cases, the following rules may be considered:

1. An operation should always be performed and performed without delay.
2. If there be any chance of establishing an opening at the normal site of the anus, the surgeon should at first direct his attention to this procedure.
3. The use of a trocar as an aid in finding the rectal pouch before or after incision through the perineum, is not sanctioned by modern surgical authority.
4. The results of attempts to establish an outlet for an imperforate rectum through the perineum, are not favorable as regards the production of a useful anus.
5. In case of failure to establish a new anus in the anal region, colostomy should at once be performed.
6. In the formation of an artificial anus the left groin is the best site for the operation.
7. Attempts at establishing an anus in the anal region after a colostomy are attended with great danger, and are generally unsuccessful.

UTERINE FUNGOSITIES AND THE USE OF THE CURET.*

CLARA SHETTER KEISER, M.D., READING, PA.

The lining membrane of the uterus may under certain circumstances become covered to a varying extent with fungous growth, displaying a decided tendency to hemorrhage. The causes of this development are engorgement of the uterus and retention of portions of the placenta.

Hyperplasia of the endometrium and organization of placental remains are very different pathologic processes, yet with symptoms so identical as to make it difficult to discriminate between them, making it quite practical to consider them together. Fungous degeneration is of frequent occurrence. It plays an important part in menorrhagia and metrorrhagia and the excessive hemorrhage it produces lowers the patient's vitality. Some authors term it granular hyperplastia, or polypoid endometritis. Prolonged congestion of the uterus creates hypergenesis of tissue which results in hyperplastic growths upon the endometrium.

In cases following abortion, small pieces of the placenta remain attached, and fungosities result. So among the causes are abortion, subinvolution, laceration of the cervix uteri, fibroma and displacement. The only symptom of significance is hemorrhage, which may be either a metorrhagia or menorrhagia.

The diagnosis as a rule is not difficult. A patient states that she suffers from excessive flow at the menstrual or intermen-

* Read before the Berks County Medical Society.

strual periods. On examination no neoplasm, ulceration or large portion of placental remains are discovered, hence fungosities are suspected. To determine their presence, a vaginal examination by the aid of the speculum is necessary. The cervix must be steadied by the tenaculum, and the cervical canal, if it be very small, can be gently dilated by two or three graduated dilators, sufficiently to admit a curet or loop of wire. This is passed in and drawn gently down the anterior surface of the uterus, then over the posterior surface, and then into each horn. On each withdrawal it should be examined to see if it has dislodged any fungosities. If carcinoma is suspected, these small particles can be examined by the microscope to ascertain if they are benign or malignant.

These growths may last for years, neither increasing nor diminishing. The repeated hemorrhages due to them undermine the patient's strength. They usually cease at the menopause, but not always. They will seldom if ever be removed by constitutional treatment, the only reliable measure being the use of the curet. Some authors advise the use of Sim's sharp steel curet, but this method is so harsh as to be dangerous, as it frequently causes peritonitis or cellulitis. I use Thomas' dull wire curet, which consists of a copper wire with a loop at its extremity, and slightly flattened at its edges.

By the use of this instrument the growths are looped off, and the endometrium is neither cut nor torn, so it is practically harmless, at least, as much so as the passage of the sound which, though generally unattended by danger, will occasionally cause an inflammation. Of the cases in which I have successfully used this curet, I will describe three:

Mrs. G—, aged 29, had three children living, and had a miscarriage at three months. This was followed by a constant flow of blood for one month, which her family physician had failed to check by the administration of medicines. When I saw her she was anemic from loss of blood. She suffered from headache, backache and weakness, and was compelled to keep in a recumbent position. I prescribed aromatic sulphuric acid and fluid extract of ergot to check the hemorrhage, but without sucess. I then decided to curet, believing that small portions of the placenta had remained in utero, and become attached to the endometrium. I succeeded in removing a number of fungosities and in securing the recovery of the patient. About one year later she had another miscarriage, followed by a continuous flow of blood, and finding that medicine failed to suppress the flow, I at once curetted the uterus, and the hemorrhage ceased.

Miss H—, aged 19, a seamstress, came to me suffering with a train of symptoms incidental to uterine disorder, such as headache, bearing down, backache, leucorrhea, general weakness and profuse menorrhagia. On examination I found a uterus engorged, a viscid leucorrhea, and an endocervicitis. The least touch would increase the flow. I prescribed the elix. ferri. quinia et strychnia as a tonic, also aromatic sulphuric acid and ergot to check the hemorrhage. Locally she was ordered to use a vaginal douche, consisting of one drachm of alum, one drachm of borax and one quart of water daily. A borated tampon was introduced and removed the following day. The iodin and carbolic acid mixture was applied to the whole length of the uterine canal with the pipette. This treatment, though beneficial, did not check the hemorrhage, so I decided to curet, and was surprised at the large number of fungosities I removed. I then applied carbolic acid to the uterine cavity. After this the hemorrhage was considerably lessened, but was not entirely checked. So ten days later I again curetted, and this time the flow ceased. The local treatment was then continued weekly until her health improved.

Mrs. H—, aged 54, was suffering from hemorrhage, which so weakened her as to render her unable to come to my office. I found her in bed. History as follows:

She had borne five children, and ten years before had ceased to menstruate. She never had any uterine disorder to her knowledge, and never any leucorrhea until one year before, and since then had a constant leucorrhea, and the last month a continuous flow of blood. There was an absence of pain, the only symptoms present being loss of blood and weakness. I naturally feared I had a case of malignant disease, but on examination found

no evidences of carcinoma. The cervix was atrophied, the uterus soft and movable, two and one-half inches in length, and no induration, ulceration or any symptom, but the hemorrhage, which the slightest touch increased. I prescribed elixir. ferri. quinia et strychnia as a tonic, and aromatic sulphuric acid and ergot to check the hemorrhage, which it failed to do, so I applied Batty's fluid to the canal and introduced vaginal tampons of cotton saturated with an antiseptic preparatory. A week later I curetted the uterus and removed a large number of fungoid growth, and applied pure carbolic to the uterine cavity. This lessened the hemorrhage considerably. About ten days later I again curetted the uterus, and after this there was no more hemorrhage, and the patient's strength increased so that she is able to do considerable work. She now seems well and happy, and expresses great satisfaction at the result of the treatment. I diagnosed this case as one of villous degeneration of the endometrium as described by Dr. Goodell in his "Lessons in Gynecology," in which he mentions three cases which occurred to him.

The first, a corpulent lady, aged 50 years, had ceased to menstruate five years previously, but during the last year she had hemorrhages at irregular intervals. Examination revealed a number of vegetations. He curetted the uterus several times without checking the disease, owing to the fact that it developed a cancerous nature. His second case, however, was a more fortunate one. This lady was aged 45, and for the last year had been bleeding desperately at her menses, and the last three weeks had been losing constantly. Examination revealed to him an os angry-looking enough to be mistaken for a cancer, and the hemorrhage was so free as to cause him to diagnose a polypus. After dilatation by tents no polypus was found, only vegetations, which he removed by the curet. He found it necessary to do this several times, but the patient made a complete recovery. His third case occurred in a lady aged 65, fifteen years past the menopanse, who in all that time she had not lost any blood, when suddenly she had a profuse flow. Dr. Goodell curetted the uterus and removed a number of small growths, which resulted in complete cessation of flow and restoration to health.

He says these cases were to him a pathologic puzzle, and the prognosis must be a guarded one, yet not wholly unfavorable. So in regard to my case, while I do not overlook the fact that it may at some future time develop a malignant type, I do not believe that any one at the present time would diagnose it as such, and on account of her good condition at present I hope it will resemble Dr. Goodell's second case of villous degeneration of the endometrium which made a complete recovery.

THE DRAINAGE TUBE IN THE UTERUS TO PREVENT AND RELIEVE PELVIC INFLAMMATION*.

The author summarizes a valuable paper as follows:

1. A uterine tampon is not a true drain and even obstructs drainage in many cases.

2. Capillary drainage is secured by carrying a strip of gauze up into the uterine cavity, not packing it, and then it drains for a few hours only.

3. Gauze cannot act even as a capillary drain when either end or center is constricted, or when coated with mucus.

4. Gauze when saturated with serum, unless it contains an antiseptic, forms a hotbed for germ development.

5. Never tampon the uterus in puerperal septic infection except to check hemorrhage.

6. The good effect of a gauze tampon in cases of endometritis and after abortion is not due to drainage, but to its effect as a tampon, i. e., checking hemorrhage, stimulating uterine contractions, prolonging medication of the endometrium, and acting as a surgical dressing.

7. The uterine drainage tube is the most essential factor in the treatment of puerperal infection and the best method of securing drainage when demanded in other diseased conditions of the uterus.

8. It will save more lives, relieve and prevent more pelvic complications than any one factor at our command.

* Dr. R. R. Kime, in the *Southern Med. Record.*

COMMUNICATIONS.

A NEW METHOD OF DISINFECTION OF LARGE ROOMS AND WARDS WITH FORMALIN.*

HANS ARONSON, M.D., BERLIN.

In the beginning of the year 1892, Trillati[1] and I[2] independently made the first exact studies of the antiseptic properties of formaldehyd, and in the succeeding years many attempts were made to utilize the material for disinfection upon a large scale. The formaldehyd gas, to whose bactericide properties I called attention in my very first communication, was naturally the form in which it was sought to be employed. But simple as the problem appeared, there were great practical difficulties in the way of its solution. The easiest way was apparently to develop the gas by means of heat from the commercial solutions of formalin. It was soon apparent, however, that this method was an impossible one.

So soon as the concentration of the solution exceeded 40 per cent., a polymerizing of the formalin occurred, with a precipitation of solid paraformaldehyd. It the heating is continued, a solid, coherent mass forms in the bottom of the receptacle employed, which finally begins to burn. To avoid this difficulty it has recently been attempted to obtain the gas from a solution of formalin in methylated alcohol, called holzin. This method, however, has several great disadvantages. The unavoidable spattering of the concentrated solution of formalin when heated may cause unpleasant accidents to persons in its neighborhood; the vaporization of large quantities of methylated alcohol is not innocuous; polymerization of the formalin cannot be entirely avoided; and large quantities of the costly wood alcohol are wasted. Finally, it is not possible with this apparatus to develop large quantities of formaldehyd vapors in a short space of time; and this latter factor is of vital importance for a thorough disinfection.

In a second class of apparatus an attempt is made to develop the formaldehyd vapors by means of the oxidation of methyl alcohol itself. For this purpose a large number of lamps have been devised by Trillat, Bartels, Krell, Beuster, Schulze, and others. Practical use of these lamps on a large scale has given unsatisfactory results (comp. Pfuhl[3]). This was to be expected when we remember that the oxidation of the methyl alcohol in these lamps is generally effected by means of glowing spirals of platinum wire, and the product of aldehyd, which alone is efficacious, forms necessarily only a small percentage of the methyl alcohol that is employed. By far the greater part of it is lost as carbonic oxide and carbonic acid gases. Apart from the cost, a large number of lamps are required to effectively disinfect even a small room, as Pfuhl has proved by practical experimentation.[4]. Nor does it seem proper that the formaldehyd should be thus made at home, on a small scale, not to speak of he danger from fire. Schepilewski was right when, in a recent communication, he doubted the possibility of disinfecting large areas by means of formalin in this manner.

Good results in disinfection upon a large scale were first obtained by Roux

* Translated from *Zeitschrift fur Hygiene und Infectionskrankheiten*, Vol. XXV., Jnne, 1897.

[1] *Comptes Rendues*, T. CXIV., p. 1278.

[2] *Berliner klin. Wochenschrift*, 1892, No. 30. The paper before the Berlin Medical Society was read before Trillat's communication appeared in the *Comptes Rendues*.

[3] *Zeitschrift fur Hygiene und Infections krankheiten*, 1896 Vol. XXII., p. 339.

[4] These remarks apply also to various American formaldehyd generators in which wood alcohol is used to produce vapors of formic aldehyd.

[5] *Annales de l' Institut Pasteur*, 1896, Vol. X., p. 283; comp. also Bosc., p. 298.

and Trillat[6] by means of a pressure apparatus constructed by the latter. In this a formaldehyd solution is greatly superheated under a pressure of three atmospheres. The deposition of paraformaldehyd is prevented by the addition of calcic chlorid. But the apparatus has many disadvantages from a practical point of view. Apart from its great cost (for all pressure apparatus must be very solidly and strongly constructed), I consider it quite improper to give such autoclaves into the hands of laymen; and it would certainly be in contravention of our police regulations.

A simple apparatus which could be readily handled by the unskilled, and by means of which sufficient quantities of formalin gas can be quickly developed for the disinfection of rooms and houses, is therefore a desideratum Such a one has been constructed by the chemical factory of E. Schering.[6] In view of the great importance of the subject, I have gladly undertaken the task of making a thorough bacteriological investigation of its action. The solid polymerized formalin or paraform (called also trioxymethylen) is used for the development of the formalin vapors. The antiseptic properties of this body, which I[7] first described at the "Verein fur innere Medicin," March 12, 1894, depend upon the vapors which proceed from it at ordinary temperatures. At the same time I demonstrated, by means of numerous experiments upon man and animals, that the polymerized formaldehyd was an almost non-poisonous body, and was well borne by children when given internally, even in large quantities. The use of this body as a formalin gas developer is very appropriate. *It has been found to be more practical in many ways to use the polmerized formaldehyd compressed into the form of pastils, rather than as a powder.* (Each such formalin pastil, which contains 100 per cent. of formaldehyd, weighs 1 gramme [15.4 grains]).

The action of the apparatus is as follows: The hot gases of combustion transform the paraformaldehyd into gaseous formaldehyd, and are afterward thoroughly mixed with them. This mixture of the vapors of formaldehyd and of combustion enables the necessary quantity of moisture to be present to hinder a polymerization, and renders a thorough disinfection possible. In the stream of the gases of combustion a rapid distribution of the effective formaldehyd vapor into all portions of the space to be disinfected takes place.

The apparatus consists of a cylindrical sheet-iron mantel, beneath which is a spirit lamp with a suitable wick. In the upper part of the mantel hangs a vessel, destined to contain the formalin pastils. The upper end of the vessel is provided with a number of slits, through which the gases formed by the combustion of the alcohol (carbonic acid and watery vapor) must escape. In their passage through the vessel there is a mixture of these vapors of combustion with the formalin vapors generated by the heating of the formalin pastils.

The mode of using the apparatus is extremely simple and safe. The disinfector is placed upon a sheet of tin on the floor of the room to be disinfected. In the apparatus that I employ from 100 to 150 pastils can be vaporized at once. For the production of greater quantities of formaldehyd vapor, several of these apparatus must be used together.

The lamp is filled with ordinary alcohol (80 to 85 per cent.); about twice as many cubit centimetres of the fluid being employed as there are pastils to be vaporized in the vessel (*i. e.*, 100 pastils require about 200 ccm., (7 ounces) of alcohol). The wicks should project but little above the necks of the burners, lest the apparatus get too hot. The vessel is to be filled with formalin pastils, and the disinfector placed over the lighted spirit lamp. Windows, registers, and other openings are to be carefully closed before the lamp is lit, and the key-holes should be stuffed with paper. After the room is closed the apparatus may be allowed to burn itself out.

I have experimented with this apparatus under conditions as similar as possible to those met with in practice. I used a room about 100 cbm. (3500 cubic feet) in size, 7.7 m. (25 feet) long, 4.0 m. (13 feet) broad, and 3.3 m. (10¾ feet) high, in different portions of which the test objects were placed. I may mention at once that

[6] Patents have been applied for on this method of disinfection.

[7] This paper has not yet been published *in extenso*, There are good abstracts of it in the *Munchner med. Wochenschrift*, 1894, p. 239, and the *Berliner klin. Wochenschrift*, 1894, p. 901.

there was no difference in the result whether these test objects were placed on the floor of the room, suspended in its middle, or put near the ceiling. This demonstrates the even distribution of the formaldehyd vapors, due to the fact that its specific gravity is almost the same as that of the air.

For test objects I employed the staphylococcus, the streptococcus, the bacillus pyocyaneus, typhoid and diphtheria bacilli, anthrax spores, and tubercle bacilli. The test objects were prepared in various ways. Sterilized strips of gauze or wall-paper, or strips of linen or woollen stuff, were soaked in bouillon pure cultures of the first five varieties of bacteria, and were used moist or after drying in vacuum. Anthrax cultures containing spores were scraped from the agar tubes, floated in distilled water, and used for the impregnation of threads of silk or gauze. In one experiment they were spread in a thick layer upon strips of sterilized wall-paper. The tubercle bacilli were used in the form of thick surface cultures on bouillon, and also in the shape of tubercular sputum which was thickly smeared upon strips of gauze.

In the first series of experiments, two disinfectors, each provided with 100 pastils, were placed in the room, making about 2 grms. (30.8 grains) for each cubic metre (35 cubic feet). After the test objects were placed in position, the two lamps were lit, the room closed, and only opened again after 24 hours. On first entering it the formaldehyd odor was so intense that I could only remain in it for a very short time, on account of the great irritation to the eyes and throat. But opening the windows quickly dispelled the odor. The pieces of cloth, etc., were taken up with sterilized forceps, inoculated into bouillon tubes, placed in the incubator, and observed for weeks. In every case portions of the same test objects that had not been exposed to the formalin vapors were inoculated upon similar tubes to control the experiments; and in every case they showed an abundant growth. In a large number of the trials the test objects were washed in a dilute of ammonia solution after the disinfection, to remove any traces of formaldehyd, which might interfere with the growth of the culture. Similar non-disinfected test objects were treated with the same ammonia solution, and showed an undiminished vigor of growth.

The results of these numerous experiments, the minuter details of which are appended, were that, with the exception of a few tubes which were contaminated with other bacteria during the process of inoculation there was no bacterial growth in any of the tubes. To test the absolute sterilization of the anthrax gauze and silk threads, portions of them were inserted under the skins of guinea-pigs. And while control animals treated in precisely the same way with non-disinfected material died after 1½ to 3 days, those treated with the disinfected material remained entirely healthy. The testing of the tubercle bacilli, both of the pure cultures and sputum, was done upon animals. Similar quantities of untreated pure cultures and of those that had remained for 24 hours in the disinfected room were rubbed up in a sterilized vessel with 6 ccm. (1 2-3 drachms) of water, and injected into the abdominal cavity of guinea-pigs. The pieces of gauze with the sputum and dried were soaked in a similar manner in a few cubic centimetres of water, and similarly injected. The control animals died in from 4 to 5 weeks with typical tuberculosis, while the guinea-pigs treated with the disinfected material remained healthy; and, when I killed them six weeks afterward, they showed no trace of tuberculosis.

The dust upon the floor of the room, and also that obtained by superficial scraping of its walls, proved to be entirely sterile after the 24 hours' disinfection.

A second series of experiments were made with one disinfector and 100 pastils, being one pastil per cbm. (35 cubic feet). All the non-spore containing material, staphylococci, streptococci, pyocyaneus, typhoid and diphtheria bacilli were killed after 24 hours' sterilization. But the anthrax spores were not in every case destroyed. Some of the strips of gauze and silk threads proved sterile; but others developed a culture. For practical purposes, however, this number of pastils would be entirely sufficient.

[TO BE CONTINUED.]

CURRENT LITERATURE CONDENSED.

"Humanized" Milk.[1]

In the first place, it is necessary to know the average composition of human milk and that of the cow, the latter of which is to be "humanized." The following table, based on analyses by J. Konig, shows the average composition of the two fluids:

	Human.	Cow.
Water	87.41	87.17
Casein	1.03	3.02
Albumen	1.26	0.53
Fat	3.78	3.69
Milk-sugar	6.21	4.88
Ash	0.31	0.71

The table shows that in order to humanize cow's milk it is necessary to increase the amount of milk-sugar, decrease that of the casein and albumen (these two bodies being usually tabulated together as "casein" or "albuminous constituents"), and at the same time maintain the amount of fat *in statu quo*.

This may be accomplished in two ways, either by removing the casein by means of rennet and adding milk-sugar, or by diluting the milk with water and adding the requisite amount of fat and sugar to the diluted milk. The first method, while yielding a finer product, is not adapted to commercial ends, owing to the length of time necessary for preparation and to the expense attendant. The process is briefly as follows:

Take one pint of milk, from which the cream has been removed, and add sufficient rennet to precipitate the casein. Remove the curd, and in the whey dissolve 280 grains of milk-sugar, and add this solution to two pints of new milk, subsequently adding the cream which had been removed. In this way a milk is obtained which has the following composition:

Water	87.17
Casein and albumen	2.37
Fat	3.69
Milk-sugar	6.21
Ash	0.71

[1] HAROLD STACY, Ph.G., *Bulletin of Pharmacy*, Aug., 1897.

It will be noticed that this resembles very closely human milk in composition, the casein having been reduced one-third and the milk-sugar increased from 4.88 to 6.21 per cent. ,while the amount of fat has remained unchanged. A simpler and in some ways more satisfactory method of reducing the percentage of casein is by dilution of the milk with water, the diminution in the percentage of fat being afterwards made up by addition of fresh cream or butter. It is claimed that by diluting the milk with water it is altered in such a way that the casein coagulates in a similar manner to human milk, the coagulum of the latter being looser and more flocculent than that formed from cow's milk under ordinary conditions.

To reduce the contents of casein in cow's milk to the same percentage as that of human milk it is necessary to add three parts of water to every five parts of milk. The fat and milk-sugar are naturally diminished, and the requisite percentage must be made up by addition of more milk-sugar and fat. The latter is added either in the form of cream or butter, preferably the latter, owing to its more constant composition. It is readily emulsified by the milk. The following forms a good working formula:

New milk	2 pints.
Fresh butter	3 drachms.
Milk-sugar	500 grains.
Water	19 ounces.

Dissolve the milk-sugar in the water and add to the milk and butter previously emulsified. If cream be used the following formula, given by Clague, will be found to work well:

New milk	3 ounces.
Cream	1¾ ounces.
Milk-sugar	1⅛ ounces.
Water	18 ounces.

Mix secundum artem.

Soxhlet objects to the addition of fat to the diluted milk, and suggests that additional milk-sugar be added to make up for the deficiency in fat. He states that

milk containing an abnormal amount of fat cannot be sterilized without the fat becoming partially separated, and the state of emulsion so necessary to assimilation being disturbd. All the functions performed by fat are equally well performed by carbohydrate material, and to make up the deficiency in fat an isodynamic amount of milk-sugar must be added to the diluted milk. According to Rubner 243 parts of milk-sugar are isodynamic with 100 parts of fat, consequently a deficiency of 1.32 per cent. of fat may be made by an addition of 3.19 per cent. of milk-sugar. Soxhlet, therefore, advocates a milk preparation as follows: Prepare a solution of milk-sugar in water of the strength of 12.3 per cent., and to every two parts of milk add one part of this solution. The resulting fluid will have this composition:

Water	85.30
Casein	2.37
Fat	2.46
Milk-sugar	9.41
Ash	0.47

Such a milk possesses all the nutritive properties of human milk, is readily prepared, and does away with all troublesome additions. Moreover, it coagulates in a very similar manner to human milk, a matter of the very greatest importance in infant feeding.

In the preparation of all these "humanized milks" no mention has yet been made of the mineral constituents. This is of sufficient importance to warrant special attention. Human milk is alkaline to litmus, containing only one-sixth of the amount of lime present in cow's milk and only about one-third of the amount of acid phosphates. It is very important to correct this excess of acidity and mineral salts in preparing humanized from cow's milk. This may be best accomplished by addition of sodium carbonate. This alkali is preferable to lime-water, as cow's milk already contains an excess of lime salts. The amount necessary for neutralization of the excess of acid salts is six grains to the pint. This addition should be made after the process of sterilization. Dr. A. E. Wright has advocated removal of part of the excess of lime salts present in cow's milk on the ground that the coagulum formed is less dense in proportion to the diminution in lime salts present. He advocated the addition to the milk of a small amount of sodium citrate. In the proportion of one part to 200 parts of milk he finds that sodium citrate prevents any coagulation by rennet, and the addition cannot be readily detected by the palate. A much smaller proportion is sufficient to "humanize" cow's milk.

Attention may be directed here to the fact that certain writers on this subject have advised the addition to these artificial milks of various forms of carbohydrate food, such as oatmeal flour or decoction, arrowroot, barley water, and even meat broths of various kinds. Such additions can only be deprecated, seeing that the saliva of infants does not contain any ferment capable of converting starch into sugar or other assimilable form. Milk-sugar is the only carbohydrate found in the milk of any animal, and if additional carbohydrate food is needed it can best be supplied by increasing the amount of this constituent.

A word must be said as to the use of condensed milks for infants' food. For many reasons these milks are not to be recommended. The processes which they are put through in their manufacture lead to considerable alteration in the character of the fluid. The casein becomes less readily precipitable and is less readily digested. Changes also occur in the character of the albumen, which is generally coagulated; the percentage of milk-sugar is somewhat reduced, and the fat is thrown out of its emulsified state to a greater or less extent in various brands. As a rule a portion of the fat is removed before concentration. More important than this is the probable destruction of the natural germicidal properties of the fresh milk and of its natural ferment.

The variation in composition is well shown by comparing the results here given of analyses of various brands:

	Water.	Casein.	Fat.	Milk-sugar.	Ash.
1	56.71	13.18	14.13	13.98	2.00
2	55.43	14.00	13.16	14.84	2.53
3	56.01	13.90	14.02	14.06	2.81
4	52.07	14.26	15.06	16.97	2.80
5	57.96	8.50	16.02	16.32	2.20
6	51.72	11.09	14.33	19.51	2.75

(These brands were all unsweetened.)

It is impossible, where such variations in composition exist, to give working formulae for humanizing the commercial condensed milk.

Of considerable importance in connection with preparation of humanized milks is the question of sterilization. So much has been written on this subject that more than a summary of the result arrived at is unnecessary. A valuable paper on this subject is that by by Dr. Albert Leeds and Professor Conn in the report of the Dairy Commission of the State of New Jersey for 1892 on the "Preservation of Milk," to which those interested are referred. After what has been said on the subject of condensed milks it will suffice to say that a boiling temperature for sterilizing milk is highly undesirable, and experiments have shown that the most satisfactory method of preserving such milks is by the method of Pasteurization. By keeping the temperature below 70° C. (158° F.) the natural properties of the milk are but little affected, while the above temperature or a few degrees below will suffice to kill all pathogenic organisms likely to be persent in milk. Preservatives are not recommended for addition to humanized milk, and in particular the use of formaldehyde to preserve milks intended for infant use should be condemned. This agent, even in minute amounts, has a most injurious action on the mucous membranes, converting them, if the action is constant, into a substance closely resembling leather and setting up severe irritation. Given to infants in milk, its action on the coats of the stomach cannot be other than injurious, even in the minutest amounts, and when used for this purpose may possibly prove to be the forerunner of lifelong dyspepsia.

Obesity—To Diminish and Cure[2]

I report the results of nearly five years' observation on a reliable and harmless way to diminish over-fatness and the evils it creates.

According to my observations, the four common causes of over-fatness are—congenitally small lungs with defective oxygenating capacity: eating excesively of all kinds of food: want of lung-expanding exercise: or alcoholics to excess.

Iodin, bromin, mercury, lead, arsenic, liquor potassium, lemon juice, sour wines, vinegar, purging, sweating, semi-starving, various kinds of baths, smoking and chewing, fish diet, bladder wrack, phytolacca, gulf weed, and various quack nostrums, have each more or less reputation for diminishing weight.

Many of these have a proper place and useful power, but when long enough continued in quantities sufficiently strong to destroy any considerable amount of fatty tissue, they are dangerous to health. All act either by saponifying the fat or by producing numerical atrophy. Either process exerts such powerful influence on the lymphatic and absorbent systems, as to cause not only re-absorption and destruction of olein, stearin, margarin, protoplasm, nuclei, and other physiologic constituents of the fat cells, but goes still further, and annihilates myriads of cell-membranes, red blood globules and other essential elements of the economy. As these perish, vitality is reduced and health is impaired.

While destroying fat many of these articles act as slow poisons and cause mal-assimilation and mal-nutrition, with loss of appetite and repugnance to food. If used too heroically, or continued beyond a certain period, anemia, general debility, or other and fatal affections may be induced.

Many over-weighted persons, anxious to throw off naturally their unnatural burden, resort to pedestrianism, bicycling, gymnastics, rowing, massage, electricity, restricted sleep, thyroid extract, skimmed milk, and other popular means. A few begin some dietary system—Bantings, Ortel's, Ebstein's, Bruen's, or others—which all aim to limit the supply of elements that form fat and to increase its re-absorption. Every one of these dietary systems with which I am acquainted seems to be based on rational principles.

Neither with cases of obesity of fabulous proportions, nor with over-fat invalids or semi-invalids have I had any experience, but any healthy person with *simple uncomplicated over-fatness*, who will drink a large glass of the artificial Kissingen water kept at most drugstore soda-water fountains, twenty or thirty minutes after each of the three meals one day, and a glass of artificial Vichy water after each of the three meals the next day, and per-

[2] W. T. CATHELL, in *Trained Motherhood*, August, 1897.

sistently continue to take them thus, week after week, will gradually lose fat, and be correspondingly relieved of the discomforts of obesity; after which their use should be discontinued.

These are both cheap waters, and may be taken at the counter, or bought to drink at home. While using them, the person should keep tally on girth and weight, in the same clothes and on the same accurate scales, every two or three weeks. If he has lost more than a couple of pounds for each week, drink less of each. If he has lost less than a couple of pounds for each week, squeeze lemon juice into each glass of the Kissingen, to increase its acidity; and also add one teaspoonful of the aromatic spirits of ammonia to each glass of the vichy to increase its alkalinity.

Assist the action of the waters by using starches, sugars, fats, alcoholics, and all other fat-forming food but sparingly; avoid over-eating; and use neither food nor alcoholics except at the regular meals. Take light suppers, so that during the longest interval between meals there may be present the least pabulum for fattening, and especially that emptiness of the stomach may be complete during sleep, so that nature may utilize some of the surplus fat to meet the shortage. Take moderate outdoor exercise in any way that will increase and deepen the respiration

Either a specific physiological action, or some definite chemical affinity between these artificial Kissingen and Vichy waters, taken by this rule, and abnormally-fat human tisues results in a lessening of the fat, with neither purging nor sweating nor injury to brain, blood, muscle, or general health. But how, or why, is debatable

Whatever the exact mode of action, there certainly exists some well-marked relation between these two waters taken thus and adipose material, that tends to correct the irregular and excessive fat-production without harm to muscle and other tissues. They not only reduce over-fatness but also tend to permanently correct the irregular and excesive fat-making without injury to health. The subject gradually becomes thinner, and looks and feels younger and more active, as the superabundance disappears. The skin, being healthy and elastic tissue, contracts correspondingly, leaving neither flabbiness nor wrinkles, bagginess or crow's-feet; while brain, muscle, nerve, blood, glandular nutrition, and strength all remain normal, proving that the waters do not cause either pathological diminution from inanition, or loss of strength and cachexia from degeneration, as the various "anti-fat" blood depuratives and glandular eliminatives are notoriously apt to do.

It must be remembered that a person in normal flesh has as much blood, and usually better blood, than a person whose weight has been much increased by fat. and that Kissengen and Vichy act on the fat and not on either the blood, the glands or the bowels.

The natural products, when fresh, may answer the purpose, but I prefer and use the artificial waters made by the chemist to represent the springs at their best. Both waters should be used while fresh, and as the natural waters must be brought from afar, it is possible for them to become stale before use. In actual practice I have found the artificial waters made by mineral water men everywhere, to be more definite in quality and more certain in their action on fat, than are the natural waters.

Empyema in Young Children.[3]

Empyema in children has always been for many reasons a disease of the greatest interest and importance, of interest on account of the differences in opinion often arising as to treatment, of importance because there is always a great likelihood of the presence of pus in the pleural cavity being overlooked. Empyema in children should not be a particularly fatal affection, provided that an early and correct diagnosis is made, and that prompt measures are adopted for the removal of the purulent matter. According to Gerhardt most of the pleurisies occurring in children are purulent, and it has been estimated that fully two-thirds are metapneumonic.

That the pus should be removed as quickly as possible is agreed upon unanimously, but in regard to the means to be employed toward this desirable end opin-

[3] Editorial in *Pediatrics.*

ions still differ. Solis Cohen says that absorption of pus from the pleural cavity is practically a myth. Although it is possible for small effusions to be absorbed, it may be laid down as an axiom that where there is pus present the only rational treatment is evacuation. Now as to the means, the late Dr. Sturgess, of England, believed that resection of rib was necessary, and that the greatly lessened mortality was altogether due to improved treatment in this respect. Some even go further, and insist on the necessity of washing out the cavity.

Dr. Joseph Winters does not think that resection of the rib is indicated, but holds that incision and drainage is sufficient. He, however, is a believer in irrigation, and contends that washing out by means of hot water at a temperature of 125° or 130° cannot have a prejudicial effect. Dr. E. Cautley gave an account at a meeting of the London Medical Society, of 86 cases treated by various methods, which gave a mortality of 16.6 per cent. The rate of mortality was about the same afer resection as after incision, except that five out of six cases under two years old treated by resection were fatal.

From a sifting of the mass of evidence on the subject it would appear that incision and drainage should be the treatment pursued with patients up to two years of age, and that after that period the surgeon should use his own judgment and perform resection if he deems it advisable. The death rate from infancy to the age of three years is very high, nearly 50 per cent., but after the age of three the prognosis is much more favorable.

The use of chloroform during the operation is not contraindicated. Dr. Winters advises that the patient should not be fully under the influence of the anesthetic, as it is desirable that he should cough and if possible cry, so that the explosive expiratory efforts should forcibly expel the pus from the pleural sac. The most important point in the successful treatment of infantile empyema is to diagnose and operate quickly, and it is probable that a fatal issue at any age is rather the result of neglect to recognize the true nature of the case at an early period than from the operation itself.

The after treatment of empyema must be left to the discretion of the medical attendant, and conducted on ordinary surgical principles. Naturally the patient should live under the most healthful conditions possible, plenty of light, fresh air, and easily digestible nourishing food. Pure air is our best remedy, and it is to be regretted that it is not more constantly at our disposal.

Suppressing the Dispensary Abuse.[4]

The writer describes an effective method which has receivd a year's trial in the Rhode Island Hospital at Providence.

Prominently displayed in the main entrance of the out-patient building is a large placard stating that the services of the attending physicians are given gratuitously and are extended only for such patients as are too poor to pay for the needed attention, and that no others will be treated. A similar statement is printed upon each admission card. No patients are admitted to the clinic without a card or letter of recommendation from some medical man, agent of a charitable association, or some person well known to the authorities of the hospital, unless they are unable to pay for such service and desire charitable aid,—save under these exceptions:

1. Emergency cases, recent accident, or sudden illness.

2. The illiterate, evident pauper class and foreigners who would not be likely to know of such a rule or understand it.

3. Any patient concerning whose ability to pay there is a doubt, yet who would possibly suffer by failure to receive immediate attention.

Publicity to these rules has been given by the public press, notices to the physicians of the State, and cooperation with the other medical charities of the city. The clinic has been made more nearly self-supporting by making a small charge for medicines and surgical dressings.

Statistics cited by Dr. Rogers go to show that while the number of deserving patients is nearly the same, the number of unworthy applicants diminished in the second half of the year almost 50 per cent., and this but bears out the claim that there has been a moral effect, that the knowledge that an attempt has been made to discover those abusing the char-

[4] Dr. F. T. Rogers. condensed from *Atlantic Medical Weekly* in *Bulletin of Pharmacy.*

ity of the hospital has prevented many from applying.

The abuse of medical philanthropy is not alone an evil in its effect on medical practise—it robs the pharmacist of many a prescription fee. The latter has accordingly a substantial motive for welcoming any measures that promise to wipe out the habitual sponging of people who can well afford to pay for advice and medicine.

Modern Treatment of Sunstroke.[5]

The author treated in hospital during 1896, 197 cases; 185 recovered and 12 died. The temperature ran from 105° to the limit of the thermometer and in many cases was as high as 109° and 112°.

His treatment was as follows: The ambulances were supplied with ice, which was put to the patient's head as soon as he was picked up. Upon admission the patient was immediately stripped, the temperature taken *per rectum*, and the body covered with a sheet, upon which were placed small pieces of ice. Ice water was dashed on the potient for 30 or 40 minutes. The most efficacious stimulant was the pouring from an elevation of a fine stream of water upon the forehead. This was continued for one to two minutes at a time and repeated. At the same time the patient was given forty minims of the tincture of digitalis hypodermically—except the full-blooded cases, which were bled.

When the temperature returned to about 104°, the patient was covered with blankets and hot bottles applied. This was done to prevent subnormal temperature and collapse. When consciousness began to return, whiskey was given. Strychnine was never given; convulsions were treated by chloroform, but they were rarely dangerous. In cases of prolonged unconsciousness, nourishment and stimulants were given by the stomach tube. Caffeine and whiskey were chiefly given, and in extreme cases hypodermics of whiskey, but never morphin. As death seemed to be the result of respiratory paralysis, artificial respiration was kept up for a long time, with surprising results. The after-treatment consisted of light diet, stimulants, fresh air, ice cap, and large doses of spirits of mindererus.

[5] Dr. Geo. F. Chander, in *New York Med. Journal.*

Stigmata of Degeneration in Epilepsy.[6]

There were various findings in patients at the Pennsylvania Epileptics Hospital and Colony Farm, and these were classified under three headings, viz.:

(a) Morphologic deviations from normal.

(b) Functional deviations from normal.

(c) Purely psychic stigmata.

Under heading *a* the stigmata particularly marked were asymmetries of the skull and face, dental anomalies, inflammations of the skin and marked pallor independent of any organic disease.

Under heading *b* were noted retarded puberty, various anomalies of the menstrual function, gluttony, merycismus.

Under heading *c* tests were made to determine the higher mental activities, such as attention, memory and association. Each patient was requested to write as many words as possible in one, two and five minute periods respectively; also to write from memory a spoken, written and a simple sentence when read; and lastly to write the associations of some familiar word (city, hospital, etc.). The results indicated a deficiency of mental activity when compared with groups of healthy children of equal age.

Food and Feeding.

Persons of sedentary habits and brain-workers need less meat than those who are active physically all day. Beyond this well-known and accepted truth the opinions of dietists, except the radical vegetarians, seem to agree that a varied diet is the most beneficial. The suggestion of a writer on food topics that children from twelve to fourteen years of age need more nutrition than before or after will be a new one to many mothers. It has been more commonly supposed that the early growing years, from five to nine, were those which demanded the abundant food sustenance.—*Annals of Hygiene.*

The American Medical Asociation, at its last meeting, appointed a committee to formulate plans for the relief of disabled physicians. In this day of co-operation among all classes and organizations, the movement is humane and timely.

[6] A. Ferree Witmer, M.D., before the Philadelphia Pediatric Society.

1853-1897.

MEDICAL AND SURGICAL REPORTER

Issued Every Saturday.

Editorial and Publication Offices, 1026 Arch Street, Philadelphia, Pa.

EDITOR
HAROLD HAVELOCK KYNETT, A.M., M.D.

ASSISTANT EDITOR
G. C. CLIFTON HOWARD.

STAFF EDITORS

A. L. BENEDICT, A.M., M.D. — BUFFALO, N. Y.
A. A. ESHNER, M.D. — *Ex-officio* PHILA. CO. MED. SOC.
T. L. COLEY, M.D. — *Ex-officio* NORTH. MED. ASS'N.

THE BUTLER PUBLISHING COMPANY, P. O. BOX 843
H. H. KYNETT, M.D., MANAGER. WILLIAM H. BURR, M.D., ASSISTANT MANAGER.

TERMS:—One year, three dollars in advance. Subscriptions may begin at any date.
REMITTANCES should be made by Draft, Money Order or Registered Letter, payable to the order of the Butler Publishing Company.
CONTRIBUTIONS of value to the medical profession are invited from all sources. Original articles, contributed exclusively to the MEDICAL AND SURGICAL REPORTER, will be paid for, after publication (payments made quarterly), or reprints will be furnished. Orders for reprints *must accompany* MSS. To ensure the return of contributions not made use of, writers must enclose return postage.
THE MEDICAL AND SURGICAL REPORTER will not be responsible for the opinions of its contributors.

PHILADELPHIA, SATURDAY, AUGUST 21, 1897.

EDITORIAL.

ASEPSIS OF SPEECH.

The time is not far in the past when a medical lecturer was rather expected to emphasize his important points by stories which it would be legally unsafe to reduce to writing. One celebrated professor was said to have put his entire course of lectures into the form of a serial smutty story, embracing minor stories of a similar nature. Perhaps the culmination of this tendency was reached at the commencement banquet, which took place immediately after the graduating class had listened to an address on the lofty character of their calling and had been dismissed with the blessing of some noted divine. We all know that flatulent dyspepsia has, as a marked symptom, a tendency to looseness of the bowels immediately after a meal. Perhaps this is the reason that the accumulation of gas for a banquet favors a metnal defecation so soon as the last course is eaten.

In very recent years, we believe, a more serious and dignified tone has come to characterize the routine work of the medical school. Plain speech, even humorous allusions to matters which are alluded to seriously, if at all, in ordinary conversation, still prevail and need no criticism; but the carpal mnemonic is no longer recited by the professor of anatomy, scarcely even hinted at, and the cleanness of language long associated—paradoxically, no doubt—with the chair of genito-urinary diseases, seems to have spread to the other departments.

One would scarcely claim that the morals of the medical profession have improved concomitantly. In fact, a medical student recently complained that certain professors wasted valuable time in quoting scripture and telling nasty stories. A certain particularly filthy after-dinner speaker is prominent in church work and probably exercises a better influence over his students than any

of the rest of their instructors. Analogously, the American President who stands highest as the type of genuine moral humanity, is known almost equally for his black diamonds of wit; while the least moral will go down in history as the author of the most stately utterances and the fewest indiscretions of the tongue.

Strangely but undoubtedly the development of purer habits in language at medical colleges is not due to the presence of women. The change is seen equally at those institutions which bar their doors to the female sex and, in some instances, the admission of women has stimulated the lecturer to the vilest flights of speech. The change seems to have been due largely to the crowding of the lecturer's mind with new discoveries which tax his capacity to the utmost and which can scarcely be communicated to a class in the limit of time at his command. Perhaps the change has been more complete and more sudden than might otherwise be expected, from the fact that modern advances have compelled the introduction of almost an entire new generation of instructors who have felt some diffidence at following the example of the seniors.

Another factor in securing purity in speech, has been the growing necessity of taking all things more seriously and the development of a superficial polish in the sturdy virtues of early America. Incongruity is the main element of at least ordinary form of wit and no nation has been so low but that it has instinctively recognized indecency as the acme of incongruity. But the modern tendency of growth cannot be delayed by amusing twists of meaning and dislocations of morals. We are growing away from all but the most subtle form of humor and we are getting to like even our vice disguised in the garb of propriety. Perhaps we are also growing morally better.

Whatever be accepted as the explanation, the profession may well be proud of the fact that medical men are ceasing to pollute their lips and infect their language with impurities foreign to their habits of thought and action.

CORRESPONDENCE.

NEUROTIC BLADDER.

In a case of neurotic bladder I had not long ago, I was fortunate in the fact the kidney was not complicated. The patient was a female. I stretched, paralyzed the urethra, and tried several things, but still the neurotic trouble continued.

Finally I made an opening into the bladder with the Paquelin cautery, thinking the drainage would relieve it. I examined the bladder with the finger, introduced through the opening. But the opening did not drain the bladder. It did for about 24 hours, and then tenesmus reappeared.

I introduced a glass tube into the bladder, to complete the drainage. This did about a week, when on one occasion the patient, during a vaginal douche, passed the glass tube inside the bladder. Immediately the opening failed to drain. The presence of the foreign body inside the bladder produced considerable cystitis and made the tenesmus still worse than it had been.

Procuring a tube made for the purpose, I chloroformed the patient, easily extracted the improvised drainage tube (a spindle on which ligatures were wound), and introduced the tube. Success followed this treatment.

C. Holtzclaw, M. D.

Chattanooga, Tenn.

OPERATION FOR CANCER.

The operation for cancer always should be done early. Cancer is at first local, and if operation is done it should be done before the cancer become constitutional. Some cases, in which I removed the mamma, have now stood five years without a recurrence. In two cases I advised operation two years ago.

In one of those cases the patient was 35 or 40 years old. She said it had existed for years, but lately it had begun to grow. I said to her, "Now is the proper time to have it operated upon." But she thought it would do no harm to let it go awhile. When I saw her later, the glands in the axilla were affected, and I said to her: "I think the time is too late, but an operation may benefit you. I believe I would have the breast and glands removed, if I were you." But I did not promise her anything. What I said to her was simply what I say to them all.

One case was already dead, and then I said to the second patient: "Madame, this is a case in which an operation should be done at once, and I think then you will become thoroughly well, although I never promise anything." She did not have the operation done then and came back later. I said then: "I think you are a little late, but there is still a chance for you, and I believe you ought to take it."

I advised her to have the breast and glands removed, telling her the cases often recover after thorough removal of the glands. After the operation was done I encouraged her all I could, but the trouble recurred and she died.

I removed the breast and glands. The denuded surface was so extensive I did not have sufficient skin to cover it and it had to heal by granulation.

Another lady also had a little lump, which became a little painful. There was some enlargement of the glands in the axilla. I said, "Your prospects are better than the other patient's, but I fear it is a little too late for you."

In that case I had sufficient tissue to bring the parts together. The patient is now apparently well; I don't say she is safe. If they had both been operated upon before the glands were involved, they would have both been saved. In the first case I took the tissues off as close to the ribs as possible.

In regard to the removal, I am in the habit of telling the patients that all cancers are at first local, and if removed when local they will be cured. I tell them they want no partial removal, but a *thorough* removal, and if there are any glands involved, these must be taken out. No man can say whether a gland is infected or not, but he can say there is great danger of the blood being infected, but when there is no adhesion and no glands enlarged, so far as you know, you can say you think the blood is not infected and probably they will recover.

J. S. NOWLIN, M. D.

Shelbyville, Tenn.

One of the unaccountable phenomena of the Black Sea has been explained by the bacteriologists. Since time out of memory it has been a well known fact that there were no deep sea fish in the body of water mentioned. Away back in 1850 the scientists made an investigation and found that fish could not live at a greater depth of 200 fathoms in the water of the Black Sea on account of the presence of a superabundance of sulphuretted hydrogen. Time and again the waters were stocked with deep-sea fish, but all died on account of the poisonous gas which was generated in such quantities in those portions of the water which should have been their natural habitat. It was known that the gas was at the bottom of all the trouble, but exactly where the gas came from was what so puzzled the investigators. The microbiologists finally took the matter in hand and a recent observer now announces that the gas is generated by the countless number of microbes which make their home in the ooze at the bottom. This microbe decomposes mineral sulphates and has been named bacillus hydrosulfuricus ponticus.—*Microscopical Journal.*

ABSTRACTS.

THE GENERAL PRACTITIONER HIS OWN HEMATOLOGIST.*

In these busy days, a period which in the history of medicine will be known as "The Age of the Specialist," the general practitioner must hail with delight a branch of the science so rapidly opening up before him. Much can be done with only a microscope, the possession of which should be the first aim of every physician.

A drop of blood from the lobe of the ear, hastily touched by the center of a clean cover-glass, is deposited on a warm, highly-polished slide and a single layer of corpuscles thus spread. With a little experience one can readily tell if the drop is more concentrated than normal or is hydremic. Examination with a one-twelfth inch oil immersion will determine the relative size of the red corpuscles, their shape, the approximate number of white to red, and detect the presence of parasites; a few minutes' search may clear up a case of malaria which has been puzzling the diagnostician many weeks. To a favored few will it be fated to study the filaria sanguinis hominis or the spirochete of relapsing fever. Should the patient live at a distance, that need not deter one from an examination of his blood; a drop of blood drawn between two cover-glasses and allowed to dry can be "fixed" and kept in equal parts of absolute alcohol and ether until ready for examination. These specimens are first stained. Staining three to five minutes in a ½ per cent. alcoholic solution of eosin, washing off excess and counter-staining a few seconds (10 to 15) in a weak aqueous solution of methyl blue will be adequate for almost every case. Under this process the red cells are stained red and the white blue, the nuclei of the white cells (also of the red if nucleated reds are present), being especially prominent.

Eosinophilic and neutrophilic granules are also stained a red color, the shades depending on affinity for eosin and the length of time the various stains have been used. The Ehrlich "triple stain" is most suitable for staining leukemic blood.

In the stained specimens another factor may be taken into consideration, the "differential count." A ratio of the varieties of white corpuscles having been fixed upon as normal, it was thought that a considerable variation from this standard might point to some pathologic condition, and such has been found to be the case in tuberculosis and other wasting diseases, where the lymphocytes are greatly increased in percentage. The method is to count 1,000 white cells, noting in the appropriate column whether lymphocyte, large mononuclear leucocyte, polynuclear neutrophile or eosinophile. These terms will become perfectly familiar after a few hours' hard study of a well-stained specimen.

In addition to the above, the presence of bacilli, cocci, myelocytes, nucleated red corpuscles, and other pathologic products may be determined by careful search.

So much then of blood-work can be done by every physician or one familiar with the microscope; no other instrument is necessary. Much more might be accomplished by the judicious purchase of the Thoma-Zeiss "counter," the Fleischl hemometer and other so-called instruments of precision. An exact knowledge of the number of white and red corpuscles per c.c., the percentage of hemoglobin, the specific gravity of the blood, is of paramount importance in the diagnosis of leukemia, pernicious anemia and chlorosis, while the treatment of these diseases follows the diagnosis as but one of its corollaries. A favorable prognosis can often be made in pneumonia by the presence of a considerable leucocytosis, while the latest achievement in hematology, the blood-serum method of diagnosis of typhoid fever as introduced by Pfeiffer and Widal will give an impetus to this infant science along a new line that will soon cause an examination of the blood to become as routine a procedure as an examination of the urine.

* Editorial in *Journal A. M. A.*

THE CAUSE OF DISEASE.*

Professor S———, a highly-educated gentleman, a Ph. D. and efficient teacher, age 46, having given about 25 years of ardent labor to his professional work, visited me for treatment March 2, 1897. He had been under varied professional care for three or four years, but was gradually getting worse. His general appearance to a casual observer was that of full health; he was five feet and eight inches in height, weighed 215 pounds, complexion dark and sallow, dark hair and eyes. In early life he had been accustomed to active physical work on the farm, and, while thus employed, at the same time growing and becoming developed to full manhood, he ate voraciously and was able to properly use all the food taken. But in mature age and with sedentary occupation, his system, in complete growth and development, did not require the same character or quantity of food. Yet he had continued to eat with unstinted appetite and the coarser food as in early life. Is it any wonder that after a time a disregard of the principle of supply and demand required adjustment.

The story of the complaints and the varied chain of symptoms are but the results of such a mode of life. The first complaint he made was that he suffered at times with great pain in passing water, accompanying the passages of renal calculi. He had continued tenderness in the region of the spleen and left kidney with hematuria; urine was variable in amount, pale, cloudy, yellow in color on cooling, and heavy straw color when first passed. Specific gravity 1022; alkaline, abundant quantities of triple phosphates and urate of ammonia, calcium carbonates and oxalate of lime were present, and a few blood and pus cells. The amount varied in the course of two weeks' treatment from 16 to 84 ounces during the 24 hours. Analysis from time to time revealed ammonium salts, phosphate and carbonate of lime. There was formed a heavy, light gray sediment in the bottom of the vessel on standing. A trace of albumin was present, but no casts or sugar.

We might rest our inquiry here and turn him over to the specialist in genito-urinary diseases, but on listening further he gave a new picture to his ailment. He complained of cough, catarral conditions involving nasal cavities, throat and bronchial tubes with constant tendency to cough, sometimes paroxysms, breathing asthmatic, with slight expectorations and tightness over sternal, right mammary and subclavicular regions with a sense of suffocation. No rales were present; general respiration was sub-normal.

Here, it occurred to me, is a demand for another specialist. I must have the aid of a specialist for the nose and throat. There are likely adenoid growths to be cut out, enlarged tonsils to be removed, or such a thickening and tumefaction of the mucous membrane of the turbinated bones or nasal cavity as to require the galvano-cautery.

After following out this inquiry with such results, I was about to phone for the appropriate specialist, when another turn of my patient's symptoms came to view. About two weeks before his visit to me he had what he temed a break-down in the class-room; he was taken with marked and persistent vertigo, disturbed breathing, with a sense of suffocation, especially in the upper portion of the thoracic cavity, great fullness in the head, especially in the front part. At the time of the break-down, there was numbnesss in the left arm, with irregular sighing, respiration, indistinct vision, inability to fix the mind upon anything with constancy and satsfaction, though previously he could hold attention to an idea until it was seen in all of its bearings.

He then entered into an extended revelation of the failure of his mental powers, being often stupid, having to goad himself up to the line of duty; his work was not satisfactory; he was often melancholy and morbid; looked with forebodings upon slight cares; sleep was unsatisfactory, dreamy, wakeful, never refreshing and restful; he complained of pain and fulness across the head.

After such a grouping of symptoms I was again aroused to my obligation to the specialist. Here is certainly disturbance

*H. J. Herrick, M.D., *Cleveland Jour. of Med.*

of the mental faculties; there seem threatening brain disease. I must have the help of a neurologist, who alone can unravel that phase of this complex problem. Presently I found that the heart seeemed disturbed from its regular beat. Its rhythm was not good; its rate was slow and sluggish, 38 to 48 per minute. Inspection revealed the impulse visible in the fifth interspace, palpation and auscultation revealed the impulse rather feeble, the rhythm often interrupted by the loss of a beat; the whole action of the heart was labored and sluggish. Here the heart specialist might give aid.

I found by further inquiry that he had already consulted an oculist and, indeed, was then under his care. The oculist had thought to relieve the vertigo and hemicrania by the adjustment of glasses and such other agencies as his art could suggest. Certain improvement in vision had been secured, as had been expected from the age, but no effect to improve the grave head symptoms had been secured. His bowels were habitualllly constipated, he having resorted to injections, having had a trained abhorrence for cathartic medicines. He had taken such domestic drugs as thoroughwort tea, and such other aids as were sugggested by the laity, having been under the care of that branch of the profession who condemns nearly the only therapeutic agents whose action we are certain of, *i. e.*, cathartics.

The principle of supply and demand is as imperative in the physical organism as it is in the commercial. The amount of food required depends upon the individual organism, the amount of exercise and the kind of food taken. If in excess with reference to the food principles required, or if the ratio of those elements is of such a character as not to be digested and appropriated for nutriment, there surely would be a cause of disturbance. If the exercise is sedentary and such as not to promote activity of digestive organs and the amount of food is excessive, there certainly would be cause of disturbance. We claim that in this general view, we find a cause of the existing disturbance. By this appreciable admission we may see how the different groups of organs may be affected so as to produce the different symptoms presented. Again, we may be able to observe how different organic diseases may occur. A variety of diseases known under our nosology may find their antecedents through such a condition. From it may arise hepatic disease, rheumatism, pulmonary diseases, diseases of the head, kidneys, skin, heart and blood vessels, and indeed most special forms of organic disease. If not corrected in due time before too serious organic changes take place in the nutrition of organs, death will result from some pronounced disturbances of those organs. These changes are slow anad occur on account of the fine adjustment between certain minute passive processes always going on.

With such a brief and imperfect survey of essential conditions of health, it seeems to me not difficult to appreciate the line of causation of disease and the only rational way for relief.

The treatment therefore of all the diseases resulting from such complex factors finds a guide along rational principles, and gives the largest hope to the suffering patient. Although I may have too generally surveyed this subject and made statements not definite enough for acceptance, I am of the opinion that one may by giving thoughtful attention to this line of inquiry, find acceptable and practicable suggestions for rational medication.

This patient had been suffering constantly from disturbances of this nature for four years, yet had been daily discharging his usual duties as best he could. There was no disease manifest which could be included under any recognized term, and yet a diseased condition demanding attention. He had eaten generously, had been accustomed to light physical exercise, sedentary habits and vigorous mental application. His digestion gave no special discomfort, but after eating he complained of heaviness, drowsiness and inability to command his usual mental application. His hands and feet were somewhat swollen, not edematous, and were bathed in cold perspiration.

On examination of the factors involved in this case there was no acute symptom. Certain grave threatenings to his future usefulness were present, besides entire inability to continue his usual labors. There was marked fullness of the abdominal cavity, with tenderness in the region of the liver and enlargement of that organ.

What are the appropriate menas for giving relief? If allowed to continue we may predict with certainty dangers to the brain, lungs, kidneys, and to the general disturbance of the system. This condition is one which precedes, in a greater or less degree, many of the grave diseases grouped and treated specifically.

In reviewing this case factors of a most complex problem are involved and have been studied with reference to causation. Causation presents the key to treatment; upon the treatment depends the progress.

The term disease is an abstract term of indefinite meaning; it is used in opposition to health. When all the organs of the body perform their functions normally there is health. If any organ, or group of organs, ceases to perform its functions normally, there is disease. Disease, therefore, is a term indicating abnormal processes in the living body. Life and the functions of organs are subject to and dependent upon processes known under the term nutrition. If nutrition is perfect there is health; if itis disturbed, there is disease. It may appear, therefore, obvious that in all disease there is a disturbance of normal nutrition. Nutrition seems to be a general term which refers to a phenomenon from which we may examine all of the problems of health. If nutrition is perfect, there is health and no disease; if disturbed, that is a disease.

This, you say, is a truism in medicine; it is an axiom. This we admit; all science is founded upon truisms or axioms; they are self-evident statements not requiring demonstration. Mathematics, the purest science, is based upon axioms. From that statement, then, as our premise, it seems to me we can examine scientifically all the problems which may arise in our professional work and inquire along rational lines. Having the conditions of nutrition present we may examine them in detail and determine with some degree of satisfaction and minuteness the disturbing causes.

Herbert Spencer and Sir James Paget agree in stating the conditions of nutrition. They are given by them in brief as:

First—A right state and composition of the blood.

Second—A regular and not distant supply of such blood.

Third—A certain nerve influence.

Fourth—A natural state of the part to be nourished.

In these different conditions we may conceive of the varied changes in each and the effects upon the processes of nutrition. Pathologic specimens are daily found which illustrate each. In the ordinary course of life nutritive processes are manifested in three modes, each of which may be observed as taking place separately. They are: first, Development; second, Growth, and third, Asssimilation. Any one of these separate steps may take place separately while the other is suspended. There may be a development without growth; there may be a growth with corresponding development; there may be assimilation and maintenance without growth or development. Each of these steps in nutrition has been forcibly and clearly illustrated by Paget as capable of separate analysis. He has also in a similarly clear and convincing way shown what are the conditions of nutrition. If these principles are true as enunciated by Paget and Spencer, they are true to-day. Principles never change. All science rests on principles. We claim for medicine a foundation of principles, hence science.

It is to be observed that no disease occurs suddenly. There must have been in all diseases idiopathic in their nature a gradual disturbing agent which has affected some one or more of the essential conditions of nutrition. Whatever agent disturbed either factor of nutrition would tend to cause disease. If there is a traumatic or infecting agent that agent affects the part through the bloood or nerve influence affecting inhibition and assimilation. The infecting poison is carried directly by the lymphatics or veins, and from there speedily into the circulation, which affects the organs or different parts to which the blood is distributed, which parts are susceptible to its destructive influence. Hence in infection the results are comparatively rapid, and even in these cases the rapidity of the effects willl be greatly retarded by the character of nutrition. Existing in some cases there may be such a degree of health and purity of blood or perfection of the conditions of nutrition as to resist the power of most septic agents. For illustration, typhoid

fever is manifested by an irritation, tumefaction and inflammation of Peyer's glands, and from this local point there is through the veins or lymphatics an infection carried into the general circulation. Before this has taken place the disease is properly enteric, subsequently, according to the effect of the infection, it becomes typhoid or typhus fever.

With these general thoughts in mind we may review the symptoms of the clinical case presented.

1st. What was the cause or what are the causes of the complex groups of symptoms presented?

2nd. What would be the course of disturbances in progress and how would they terminate?

3rd. What treatment can be adopted founded on rational means to avert the manifest unfavorable results?

SOME GEMS FROM THE RECENT EXAMINATION PAPERS.*

There remain a few people in Pennsylvania who think that an examining board is unnecessary, and there are a number in the medical profession who think that the examinations should be very easy and that no special stress should be laid on preliminary education. In order that the profession may know some of the ridiculous answers to questions and some of the evidences of lack of elementary education I give a list of some of the answers that I picked up in the recent examination held last June.

One applicant spelled tongue, "tong"; another spelled salts, "saults"; another spelled broom, "brougham"; another spelled ceratum, "serratim"; another spelled fly, "fley," and flies, "flyes." One young lady spelled sugar, "shugar"; another applicant spelled Spain, "Spane." Fir-tree was spelled "fur-tree"; another bright young man had a new way to spell rochelle, and spelled it "roachsheel," and another spelled pulse "pultz"; and sore was spelled "soar"; another spelled pus, "puss." "Corpustle," "pacients" and "beene" were found. In addition to the bright spelling quoted above, great lapses were found in grammar.

Some answers to the questions were quite amusing. The following are some of the most striking: "Hydrogen gass is degenerated from the urea." "Cantharides is derived from the root of the plant." "Pix liquida is from the Pinus Somniferous group." "Cantharides is derived from the destructive distillation of the Spanish fly." "The malar bone articulates with the occipital bone." "Picrotoxin is an alkaloid of senna and rhubarb." "Spartein and eserine are alkaloids of somnis papaverum."

One said that "Spartein was derived from Sparta," and another said it was derived from Spartus." Another said "that vinegar was an antidote for mineral acid poisons," and another stated that "An infusion of Spanish fly was one of the official preparations." Another gave us the information that the "uriniferous tubules secrete the seminal fluid." Another said that " belladonna locks up all of the secretions except the urine and feces." Another stated, without additional matter of any kind, that "the differential diagnosis between epilepsy and hysteria is that in epilepsy they fall on the stove and burn themselves, and in hysteria they don't."

Turning to obstetrics we found one man who, in rigid os, "would decapitate or perform craniotomy or would put on the forceps and deliver at once." Another in performing version, "would put his finger in the child's mouth and bring the chin under the os pubis and hold his hand over the mouth to prevent the liquor amnia from choking it." Another stated "that the endocardium is a mucous membrane which weighs 2 oz., and is separated from the pleura by the pericardium." Another stated "that the function of the optic nerve is to contract the pupil and move the eyeball." A new diagnostic symptom was offered by another man whose paper stated "that in cerebral hemorrhage the patient may vomit the cerebro-spinal fluid!" And yet all these men have diplomas!

---

* W. D. HAMAKER, M.D., Meadville, Pa., Member of the State Board of Medical Examiners, in the *Pa. Med. Journ.*

THE VALUE OF A POST-GRADUATE COURSE TO THE COUNTRY DOCTOR.*

When a physician begins practice, especially if in a small community, he is soon consulted by a number of chronic invalids who have exhausted the remedial resources of the other physicians of the place and perhaps their patience also, and still remain unrelieved. If he cures one or two of them his success is almost certainly assured and he will soon do his share of the regular work. Every community has its quota of chronic sufferers and many of them are easily relieved, if not entirely cured, by properly applied means, be they medical or surgical.

But as physicians commence to grow rich they are apt to grow less anxious and to lose the enthusiasm which spurred them to better efforts at first and enabled them to relieve this troublesome class of cases. The inevitable result is a re-accumulation of cases beyond his ability to treat successfully. Then is the proper time for him to cease practice for a short period and spend a season in a college for post-graduates.

There he will come in c ontact with men who are active, energetic and progressive. He will see that the profession has been moving rapidly along, while he has been plodding in his own way and falling behind. He will hear of the latest advances in medicine and surgery and see them illustrated; he will perform many operations, examine cases, realize the activity of the medical world in its centres and the rapid progress it has been making, store his mind with useful information and all will gain that new impetus which will enable him to resume his work with assurance.

On his return home how differently will his old cases appear to him! Not as irremediable sufferers, but as having conditions which are amenable to means now in his power to employ. He infuses new confidence in them and brings his best energy to bear upon them. The inevitable result is that he has more work, better results, and better pay.

No physician can afford to spend his life in the same unvarying manner, year after year. To his patients, as well as to himself, he owes a mental brightening and housecleaning at certain intervals, which is to be accomplished only by spending some time at such an institution as mentioned above.

This is more true of the country doctor as there is usually much less association and concerted action between fellow physicians than in the city. There is again less variety of cases in the country than in the city and unless the country practitioner has special facilities, he must either send an unusual case away or neglect it. The city doctor, however, cannot afford to do this, so he must keep himself in touch with the advancement of his profession.

THE STUDY OF NATURAL SCIENCE IN OLD JAPAN.†

We are accustomed to think of the awakening of the Japanese to an interest in the study of natural science as dating only from the new political era, which began in 1868. Prof. K. Mitsukuri, of the Imperial University, however, has recently stated in the *Annotationes Zoologicae Japonenses*, a new periodical published under the auspices of the Tokyo Zoological Society, that early in the eighth century of the Christian era there was already established in Japan an Imperial University with four departments Ethics, History, Jurisprudence, and Mathematics—and with the prescribed number of 400 students.

There existed at the same time a bureau devoted to astronomy, astrology, calendar compilation and meteorolgy, and a medical college with professors of medicine, surgery, acupuncture, necromancy (the art of healing by charms), and pharmacology. The last-named branch of study included the collection, cultivation and investigation of medicinal plants; thus a considerable amount of botanical knowledge must already have been acquired by that time.

* *Charlotte Med. Jour.*
† Editorial in *The British Medical Journal.*

Towards the end of the ninth century when a catalog of books existing in Japan was compiled by the then reigning Emperor, the Imperial library was found to contain 16,790 volumes, divided into 40 departments, and this in spite of a disastrous fire some years before. Among the medical works were some with very modern-sounding titles, such as "The Curing of Diseases of Women" and "On the Methods of Healing Diseases of the Horse." Japan in those early days derived its culture from India, China, and Corea, but the details enumerated show that educated society must already have attained a high degree of civilization.

Coming to more modern times, it is known that, during the long peace of two hundred and fifty years which the rule of the Tokugawa *shoguns* secured for Japan, literature, the arts, and all peaceful industries were developed with remarkable vigor and rapidity, and the study of natural history shared in this progress. Apart from that innate love of Nature which was ever showing itself in poetry and other arts, the study of natural products was always pursued, ostensibly with the purpose of collecting materia medica, or of discovering things that might be used as food in case of a famine, or of identifying objects mentioned in the Confucian classic, "Shi-King." Frequently were the excursions and expeditions undertaken with the view of collecting natural objects, among which plants were especial favorites, and all parts of the country seem to have been tolerably well explored in this way.

Numerous were the treatises on natural history, published or unpublished. Many of these were encyclopedic in their comprehensiveness and size, such as "Shobutsu Ruisan," by Inao Jakusui (1,000 parts, early in the eighteenth century). The last-named naturalist was so famous for his extensive knowledge that we are told his pupils were nearly 1,000 in number. Prof. Matsumura, in his enumeration of Japanese plant names, gives 306 titles of Japanese works on botany compiled previously to 1868. Many of the natural history volumes had beautiful colored illustrations, which serve their purpose even to the present day.

Natural history displays were of common occurrence, when naturalists came together with their treasures and showed them to one another and to the public. Of these, the exhibitions given by Hiraga Gennai in the middle of the eighteenth century were perhaps the most celebrated. The present botanic garden of the Imperial University was established early in the Tokugawa period—namely, in 1681—and was long renowned as the O Yaku en (Garden of Medicinal Plants).

The mastery of the Dutch language by a few earnest physicians in the middle of the eighteenth century made the rich treasury of Western civilization accessible. Japan would not, in Prof. Mitsukuri's opinion, be what it is to-day but for this leaven which had been working through and through the whole mass of society for over a hundred years before the restoration of 1868 enabled it to bear its legitimate fruit. This innovation, together with the visits of Thunberg (1775) and Siebold (1821) had an effect upon the natural history studies also. The system of Linnæus, especially in regard to plants, seems to have been well graspd with very little delay.

The most famous productions of the new school on natural history subjects are probably "Shokugaku Keigen" (Elements of Botanical Science), by Udagawa Yoan, published in 1835; and "Somoku zusetsu" (Icones Plantarum), by Jinuma Yokusai, in 1832—the latter being a standard work at the present day. A work on the use of the microscope was published in 1801.

The modern school of zoology dates from the appointment of Prof. E. S. Morse, of Salem, Mass., to the chair of Zoology in the University of Tokyo in 1877. He, with a few students under him, also soon had in working order a tolerably good musuem, the nucleus of the present zoological and anthropological collections of the Science College. It was also during his stay and through his care that the Tokyo Biological Society, from which the Tokyo Zoological Society is directly descended, was first organized. On the return of Professor Morse to America, he was succeeded by Prof. C. O. Whitman, now of the University of Chicago. It was the latter who first introduced modern technical methods. Since 1881 the development of zoology in this country has been entirely in the hands of Japanese.

TOXINS AND ANTITOXINS: A NEW THEORY.*

The authors have reinvestigated the natural and acquired antitoxic properties of blood serum from various animals, taking the reaction to doses of abrin as the most frequent criterion. They have arrived at the following conclusions:

(1) The serum of animals naturally refractory to such toxins as they have investigated rarely possesses antitoxic properties with regard to those toxins. Thus, while fowls and tortoises resist very considerable doses of abrin their serum is totally inactive with regard to abrin. Similarly, Vaillard has proved that the fowl, although refractory to tetanus, gives a serum which is without action on tetano-toxin. Even when the serum of refractory animals is anititoxic, as in the case of the ichneumon and the hedgehog with respect to serpents' venom, the antitoxic power is always extremely feeble, and by no means in proportion to the degree of immunity. There is thus no relation between the natural refractory condition of certain animals and the antitoxic power of their serums in respect of the toxins by which they are unaffected.

(2) While warmblooded refractory animals can produce antitoxins under the influence of repeated non-fatal injections of toxins, coldblooded refractory animals produce none under the same conditions.

(3) Coldblooded refractory animals, such as the frog, can acquire immunity against fatal doses of toxin without their serum becoming antitoxic.

(4) Antiabric and antivenomous serums can be used practicallv for the production of passive immunity in man and animals, and also for the diagnosis of the toxins which they oppose. The former has a very marked preventive action when applied to mucous surfaces, and hence may be turned to account in ophthalmology.

(5) The active substance of antitoxic serums is not modified by certain chemical reagents, which destroy or profoundly alter the toxins. It does not alter toxins when mixed with them *in vitro*. It appears to exist in great abundance in the leucocytic protoplasm of vaccinated animals, the leucocytes retaining their antitoxic powers after being thrice washed free from serum. It does not dialyse through membranes; it acts as energetically on the leucocytes of fresh animals as do the antimicrobic serums.

(6) Certain substances having no specific action on toxins, such as bouillon, normal ox serum, or the serums of certain animals vaccinated against various infections or intoxications can, when injected into fresh animals, act preventively as regards other infections or intoxications.

Hence immunity, natural or acquired, cannot be due to the presence in the serum of a chemical substance having the power of destroying or modifying the toxins. The true existence of a preventive substance in the serum of vaccinated animals remains yet to be proved; the authors' experiments suggest that preventive power may after all be a physical and not a chemical phenomenon.

Thus they have shown that the antitoxic function is independent of immunity, since the latter can exist in the absence of the former; further, that both natural and acquired immunity result from a special property of the cells. These according to the conditions of the surrounding mediums and their own composition, yield passively to the influence of the toxins as a bar of soft iron does to that of a magnet.

When these conditions change under diverse external influences, such as the tolerance of certain poisons, the functional state of the cells is modified at the same time. This may be compared to the conversion of the soft iron into steel by tempering; the steel can preserve its magnetization, and transmit it temporarily to other bars of soft iron or permanently to other bars of steel. The authors maintain that a similar physical explanation can be offered of the susceptibility or temporary permanent resistance of organisms to infections and intoxications.

* CALMETTE and DELARDE (*Am. de l'Inst. Pasteur*) in *British Medical Journal.*

SOCIETY REPORTS.

THE PHILADELPHIA PEDIATRIC SOCIETY.

Stated meeting, June 8, 1897.

J. P. CROZER GRIFFITH, M. D., in the chair.

DR. E. R. KIRBY read a paper on

Congenital Malformation of the Rectum, with report of a Curious Case.

(See page 225.)

DISCUSSION.

DR. GIBBON.—I assisted in a case last winter of this kind which was very interesting The patient was a female child with obstruction of the bowels. There was no bulging, no pitting at the part of the perineum where you would expect the anus to be. I do not know whether there was discharge from the vagina or not. Incision was made in the median line, the rectum sought and found about an inch from the skin. On pressure upon the lower end of the pouch it was found that fecal matter came out through the vagina. Digital examination revealed a very minute opening large enough to admit probe, very high up in the vagina. The incision was then enlarged, the lower end of the bowel dissected out of the vagina, brought down into normal position. This child recovered. I imagine the reason it did recover was simply the fact that there had been an opportunity for a small amount of matter to pass through the vaginal opening before the operation.

There is one thing about these cases: I think they take the anesthetic worse than any other kind of patients. Rectal cases always do take anesthetics badly, I believe. The child that I speak of came very near dying on the table, and required persistent resuscitation.

DR. JOPSON.—I saw one case during the last winter in the service of Dr. John Ashhurst, Jr., at the Children's Hospital, which was very much like that described by Dr. Gibbon. It was a very young female child, and the rectum opened into the vagina. The child was not at all in a desperate condition, as in the case described by Dr. Kirby. It was, however, deemed advisable to perform the operation at once. No anesthetic was used. A curved grooved director was passed into the rectum through the fistulous opening and cut down upon in the perineum, and the rectum was found without trouble, comparatively near to the perineum. It was brought down, the skin stitched to the mucous membrane, and the opening into the vagina was left unclosed.

I saw the child in the dispensary, where it was brought daily for dilatation, and although we had considerable difficulty in keeping the opening patulous, it gradually healed up satisfactorily, and an opening of good size was obtained. There seemed to be some sphincter action when I last examined the patient. Although there is still a small opening into the vagina, the child discharges fecal matter through the opening in the perineum.

DR. W. S. NEWCOME.—I had a curious case turn up at the Southeastern Dispensary. When I saw the child it was about five months old. The mother gave a history of its having had two anal openings, one the larger, and one about three-fourths of an inch back of this, from which very little feces escaped. The child had had some diarrhea, and after this it became very much constipated, so much so they had to use a spoon to relieve the child. This lasted for two months, when diarrhea again set in, and this time the opening further back had entirely closed.

When I saw the child all that was left was a small pit of about quarter of an inch in diameter of ligamented skin, which appeared very much like another anus, although I could not insert a very fine probe The child then had profuse diarrhea, and under ordinary treatment got well. It did not use this second anus at all with all this diarrhea. Two months later the child had another attack of diarrhea, and was taken to another hospital where it died. The parents would not permit a post mortem.

Another curious thing about this child was that it had two openings where the helix joined the face. It looked very much like an enlarged follicle, such as is sometimes seen on an old man's nose. I asked Dr. Piersol what he supposed this condition was due to. He said he supposed it was the remains of the bronchial clefts.

DR. MARY E. ALLEN.—I at one time had in my practice a child with an anus opening into the vagina. The child seemed to be very badly nourished, the mother had not enough milk for it, and it had to be put on artificial food and became very much constipated. It was exceedingly difficult to relieve the child under these conditions. The anus that opened into the vagina was very small. For a time it seemed to be relieved and then became constipated again, and most of the time it drew the head back as if it had some brain trouble, and suddenly one morning died without any apparent cause. They would not allow a post mortem.

I also had under my care at one time a child about six years old. The history was when that child was born it screamed every

time the bowels were moved, and had a great deal of trouble all the time up to coming under my care. It had no coccyx at all, and I gave the child ether and dilated the anus and used bougies. Afterward it was very much better, but there certainly was a great deal of fault in the nervous system of that child in more ways than one, and it is not yet a well child, although the rectal condition is better. It does not seem to have any proper feeling of the parts. It never knows when it is necessary to pass water. The water dribbles away all the time. It has to wear an apparatus constantly. It had a club-foot. That leg has never grown to the size of the other, and in consequence there is a curvature of the spine.

DR. C. J. HOBAN.—Some ten years ago I had a case in which a considerable period elapsed between birth of child and the time I saw it. I found on examination the rectum ended in a pouch one-half inch from the anus. After telling the people it would be impossible for the bowels to be opened and advocating operation they refused. The child went on three weeks, and nursing all the time, without any vomiting whatever. At the end of three weeks the pain became so distressing on account of dyspnea and pressure of bowels on the diaphragm that they consented to operation, and I performed posterior colotomy and found the bowels imperforate. I sewed up the wound and performed inguinal colotomy. Feces escaped, and the child lived about three days.

DR. E. R. KIRBY.—I think in those cases in which the rectum opens into the vagina it is perfectly proper to make an opening through the perineum, if necessary resect the sacrum and endeavor to restore the continuity of the bowel in that way. Usually the end of the malformed rectum is within one and one-half to two inches from the skin. In true imperforate rectum, unless you can feel the lower end of rectal body at a reasonable distance, it seems to me hardly permissible to grope blindly for it. It is better to have recourse to inguinal colostomy.

In regard to Dr. Hoban's case I would say that several cases have been reported in which children lived several months without having had a passage from the bowels. In one case the gut finally ruptured, and the child died of suppurative peritonitis.

DR. ARTHUR VAN HARLINGEN read a paper on

Antisepsis in the Management of Diseases of the Skin in Children.

DR. A. FERREE WITMER presented a paper entitled

Stigmata of Degeneration in Epilepsy.

(See page 238.)

DISCUSSION.

DR. J. P. CROZER GRIFFITH.—I would like to ask Dr. Witmer whether the defects referred to, particularly the mental stigmata, he would consider in any way characteristic of epilepsy, or whether they might not occur in many mental affections, such as are in some instances produced by epilepsy. I have been interested in noticing the well-known slowness in learning to walk in very many mentally deficient children, whether or not they had epilepsy. I have been looking carefully too, into the condition of high-arched vault of the palate, which is sometimes described as characteristic of the idiot, but without ever being able to convince myself that idiots showed this any more than other children.

DR. MARY E. ALLEN.—It seems to me that some of these mental defects may be caused by the medicines which are taken. One epileptic patient of mine had been taking bromid for some time, and the mental condition had grown worse and worse. I reduced the bromids, and gave her salicylic acid, or sometimes salol or salicylate of sodium, and she became so much brighter mentally that she was able to write and remember things as she had not been for several years before.

DR. A. FERREE WITMER.—In reply to what Dr. Griffith has said, I would say that the psychology of epilepsy is yet obscure. It will probably be known shortly whether there is an actual psychology of the disease or whether the mental defects found in the disease simulate those found in other defects of which Dr. Griffith has spoken.

In regard to whether the drug treatment of the disease could cause these peculiar mental defects, I should be rather inclined to think that it can. I have known cases in which the bromide has caused such maniacal excitement as to cause the patient to jump from a second-story window, but I hardly believe in the cases we have under our care that such could be the case, because they have not received any bromid for a period of four months. We have stopped the use of it almost entirely.

DR. W. S. NEWCOME read a paper entitled

Angio—Neurotic Edema in Children.

J. Comby (*Pac. Med. Jour.*) considers **alcohol injurious to healthy children.** In disease it is indicated in acute febrile diseases accompanied by adynamia, a tendency to cardiac collapse and to nervous depression. It is contraindicated in chronic diseases, in diseases of the nervous sytem, in nephritis and all forms of albuminuria, in chronic dyspepsia, dilation of the stomach, enterocolitis, acute dysentery, and disorders of the liver; also in acute articular rheumatism, in arthritic diseases, vesicular, postular, or papular dermatoses, and in acute endo-and peri-carditis. It must not be given in conditions of anemia, languor, and weakness, and this applies to the various alcoholic tonics advertised so generally. To avoid all irritating action alcohol should be prescribed for children in a syrup of some kind or in milk, etc. Even wines should not be given undiluted.

PERISCOPE.

A quart of milk, three-quarters of a pound of moderately fat beef—sirloin steak, for instance—and five ounces of wheat flour, all contain about the same amount of nutritive material; but we pay different prices for them, and they have different values for nutriment. The milk comes nearest to being a perfect food. It contains all of the different kinds of nutritive materials that the body needs. Bread made from the wheat flour will support life. It contains all of the necessary ingredients for nourishment, but not in the proportion best adapted for ordinary use. A man might live on beef alone, but it would be a very one-sided and imperfect diet. But meat and bread together make the essentials of a healthful diet. Such are the facts of experience. The advancing science of later years explains them. This explanation takes into account, not simply quantities of meat and bread and milk and other materials which we eat, but also the nutritive ingredients or "nutrients" which they contain.—*N. Y. Med. Times.*

Troisfontaines (*Journ. de Med.*) draws attention to the extreme importance of **feeding with sterilized milk in cases of inherited specific disease,** more particularly in those cases in which birth takes place before term. In these cases the child is often of extremely diminutive weight, and the author quotes a case recently under his own observation in which on the twenty-fifth day after birth the child only weighed 750 gm. There had been repeated attacks of pemphigoid bullæ on the soles of the feet and lower limbs. The child was treated with Van Swieten's fluid, 20 minims being given in the twenty-four hours. The limbs were enveloped in wadding, and the diet consisted of sterilized cow's milk, the child having been weaned shortly after birth. About 18 g. of fluid, consisting of two-thirds sterilized milk and one-third water, were given nine to ten times in the day. By six months old he had almost gained average weight, and had had only two slight attacks of intestinal catarrh. At two and one-half years old he weighed 13½ kg., and, with the exception of somewhat large and prominent forehead, there was no other morbid appearance, the teeth being well developed and normally situated. The author quotes other cases of a somewhat similar nature, all going to show the great importance of this method of rearing the child.—*Brit. Med. Jour.*

Dr. A. Poggi (*Med. News*) describes a treatment from which he has obtained excellent results in cases of **burns of any degree.** It consists in the use of potassium nitrate in the form of baths, compresses steeped in a saturated solution of this salt, or lotions. Potassium nitrate acts in burns as a refrigerant, for, on dissolving in water, it determines a marked lowering of the temperature of the liquid, amounting to as much as 3.5° C. (6.3° Fahr.). If a burn on the hand or foot is plunged into a basin of water to which a few teaspoonfuls of potassium nitrate have been added, the pain experienced by the patient rapidly ceases. After a while, the water is heated up and the pain reappears, but it quickly subsides on the addition of another supply of potassium nitrate. This bath, when continued for two or three hours, frequently dispels the pain, and, it is said, may even prevent the production of phlyctenae. The application of compresses steeped in a saturated solution of potassium nitrate exerts the same refrigerant and antiphlogistic action, the pain being alleviated thereby, and cicatrization of the wound taking place without difficulty. Prof. Vergely, of Bordeaux, has obtained very favorable results in the treatment of burns of the first and second degrees, by covering the affected parts with a thick layer of a paste prepared by mixing calcined magnesia with a certain quantity of water, leaving it to dry on the skin. In proportion as dried fragments become detached, they are replaced by fresh paste. The pain ceases immediately after the application of the moist paste, it is stated; and under the protective layer of magnesia the wounds heal without leaving any trace of the cutaneous pigmentation which is so frequently observed after burns exposed to the air.

Dr. J. Lewis Smith kept records of the **average time of appearance of the teeth** in children at the out-door department of Bellevue Hospital, excluding cases of rickets, which were most common in Italians and next in negroes. In 200 infants without signs of rickets the first tooth had appeared as follows:—In three infants at two months, in twenty at five months, in 24 at six months, in 37 at seven months, in 28 at eight months, in twenty at ten months, in fourteen at ten months, in fifteen at eleven months of age. Yet Sir William Jenner had said that if a baby did not get its first teeth by the ninth month it indicated rickets.—*Med. Rec.*

The report of the Census of 1896 of France and Algeria shows an increase of the population of France, including Corsica—38,517,973 on the 29th March last—of 299,072 in the decennial period. The increase, such as it is, is not due to the immigration of foreigners, which has diminished.—*Dub. Jour. Med. Sciences.*

Menge and Kroenig have recently published a volume on **Bacteriology of the Genital Tract in Women.** A review of it demonstrates anew the fact that the normal puerperal uterus is free from bacteria. In 19 per cent. of puerperal women who had fever, streptococci were present. So far as the streptococcus and staphylococcus of pus and the bacterium coli commune are concerned, they do not exist normally in the genital tract. The exact method of infection in many cases is hard to determine. It is possible that bacteria endogenous to the skin may cause puerperal infection, if conveyed to the genital tract.—*American Journal of the Medical Sciences.*

The *Journal des Practiciens* recommends the following formula for **the administration of creosote,** the prescription being put up in cachets:

℞ Creosote,
Benzoin .....aa gr. xv.
Powdered charcoal .....3jss.

Triturate the creosote and the benzoin for a moment together and add by degrees the charcoal. This mass is then to be divided into five or ten cachets, each one of which will contain a proper dose. It is claimed that this prescription is very well borne by the stomach.

Ergotin and Gallic Acid in Nephritis.—Pulvirenta gives the following prescription:

℞ Ergotin 5
Acidi gallici 8
Ext. et pulv. rad. rhatan..... 3
M. Fiat pil. No. xxiii.
Sig.—One pill to be taken four times a day.

℞ Ergotin 2
Acidi gallici 4
Saccharin 0.5
Muc. gum. arab..... 200
M. Sig. Teaspoonful to be taken twice daily.

These drugs are vascular astringents, and therefore diuretics. Like cantharides, they are contra-indicated when cardio-vascular compensation is efficient and diuresis copious.

They can only be of use when arterial tension is low, dropsy urgent and urine scanty. Even here they should be combined with cardio-vascular stimulants, such as digitalis, squill, strophanthus and strychnia, otherwise there is danger of over-taxing the heart by increasing its labor.—*Treatment.*

Chronic Rheumatism.

℞ Potassii iodidi .....3 iij
Vini colchici sem.,
Tinct. opii camph.....aa ʒ ij.
Tinct. stramonii ..... ʒ vi.
Tinct. cimicifugae..... ʒ iij.
M. S. A teaspoonful thrice daily.—*Med. Record.*

Milia and Sudamina are better treated by means of electrolysis than by other methods. Dr. Cantrell said that the proper manner was to insert the needle longitudinally to the lesion, and after allowing the current to pass for some few seconds, until the usual frothing took place along the needle, insert it at some other point upon the same lesion.—*Polyclinic.*

In regard to the **diagnosis of visceral stricture** Dr. Joseph Eastman, professor of abdominal surgery and gynecology in the Indianapolis College of Physicians and Surgeons, says: While abdominal viscera have not the language with which to express their ills like the viscera of the chest, auscultation, as a means of determining the gurgling, rumbling sound on the proximal side of the construction, where the peristaltic wave literally hurls against the obstruction, is of great value and should never be neglected. I know of no condition in the chest where the stethoscope will decide such momentous questions involving almost immediate life or death.—*Am. Jl. Surg. and Gyn.*

Malherbe (*Rev. de Chir.*) having observed much improvement of hearing after free exposure and scraping of the mastoid antrum and auditory meatus in cases of chronic suppuration of the middle ear, has been led to apply a similar treatment with certain modifications to patients suffering from **dry chronic otitis.** Five cases are reported in which the results of this treatment proved so satisfactory as to favor the assumption that exposure of the antrum and middle ear is indicated in cases of non-suppurative chronic otitis, which has not been relieved by other means. The main objects of the operation advocated by the author are free exposure of the mastoid antrum, which usually in cases in which such treatment is indicated, is contracted and surrounded by eburnated bone; and removal by gouge and mallet of the bone between this cavity and the middle ear. Any adhesions that may be found are carefully divided, so that the chain of ossicles may be set free. No attempt, it is stated, should be made to detach the base of the stapes from its normal connecions. The following rules have been suggested to the author by the experience hitherto acquired of this treatment: Operative treatment, he holds, should not be attempted on patients of advanced age. In cases in which the operation is indicated, it should be performed early, before deafness has become pronounced, and subjective noises have increased to such a degree as to be almost intolerable. It would be useless to operate in cases in which there is no longer any cranial perception of sound. One ear only, and that in which the trouble is more severe, should be treated at the first operation. Experience has shown that an operation on one ear may be followed by an improvement on both sides.—*Brit. Med. Jour.*

Unnecessary Street Noises.—That noise is in a high degree prejudicial to health is a truth not to be denied. In the case of nervous invalids it is frequently fatal. That many of these street noises are quite unnecessary is just as evident. There are few physicians who have not been witnesses of the harmful influence of noise on many a patient, and who cannot recall more than one case where if absolute rest had been obtainable life might have been saved. The increase of lunacy is a source of dismay and surprise both to the medical profession and the general public. May not some of this increase be laid to the charge of noise? In these days of rush and worry, when the nerves are more or less ever on tension, it seems absurd that, added to the unavoidable noises, one should be also subjected to those which might be easily suppressed without doing harm to any one. There are many ways of abating these nuisances to a large extent. Why should not asphalt or wood be substituted as pavement for the stone block and cobble now in use? Why should not the street hawker and other propagators of unnecessary sounds be stopped by law? Why should not tradesmen's wagons be tired with india-rubber? Doubtless the initial cost of these improvements would be ample compensation for the outlay. In London the law is about to step in and put down with a strong hand all unnecessary street noises. A by-law suggested by the Home Secretary has been in force for some time in many of the provincial towns of England, and will soon, it is hoped, be in London. This law is stringent in its enactments, and will doubtless have the wished-for effect.—*Bul. Phar.*

Dr. Milne Murray (*University Medical Magazine*) discusses the various views advanced to explain **the deflection and rotation of the uterus in pregnancy and during the puerperium.** He believes that we must look to the muscular walls of the uterus for the explanation of the tendency to rotation. The rotation and deflection persist for a few days after the expulsion of the child. He refers to the curious fact that in occipito-posterior cases the deflection of the uterus is nearly always to the left instead of to the right, and it is an interesting fact that there is fairly close numerical relationship between the proportion of cases of left lateral deviation. Of twenty-six cases of occipito-posterior position observed by Murray, eighteen showed definite left-sided deviation after labor. In the other cases the uterus lay in the middle line, and in none of them was the ordinary right-sided deviation noticed. Schroeder and Stratz have observed the same thing, but no satisfactory explanation has been suggested. It is a matter of some doubt whether the position causes the deviation or the deviation the position.

A London correspondent, in a recent number of the *American Practitioner and News*, speaks hopefully of the **treatment of leprosy** by the artificial induction of erysipelas on the affected parts, which was first suggested by Dr. W. Impey, medical superintendent of the leper settlement at Table Bay. There are 600 lepers there, and Dr. Impey found that when attacked by an inflammatory skin disease, such as erysipelas, measles or smallpox the part affected was invariably cured of leprosy. He claims that the patient either recovers entirely from his leprosy or that life is prolonged indefinitely beyond the normal eight years. Dr. Impey believes that the early induction of erysipelas in leprous patients will cure the disease in individual cases and ultimately stamp it out.

The pathology of diabetes insipidus remains obscure, and this is more especially the case where this condition of diabetes arises suddenly. Diabetes insipidus of sudden onset is not uncommon as a result of intracranial lesions frequently traumatic in origin. Dr. Hendrie Lloyd records a case of this disease arising in a young man of 24, "after an apoplectiform or epileptiform attack, the exact nature of which remained obscure." The main interest of the case, however, turns on the fact that the lesion, whatever its nature, caused also paralysis of the sixth nerve on one side only, and that there was no evidence apparently of any other and more widespread lesion. The fact that no other palsy occurred, and that the seventh nerve was not affected, pointed to the conclusion that the damage to the fourth ventricle must have been limited to a very small area. The urine contained no sugar, and this is in accord with the experimental fact that the puncture of the medulla may cause an increase in the flow of urine without causing glycosuria; in fact, the situation of the two punctures is somewhat different, so that the experimenter can produce polyuria alone, or polyuria and glycosuria at will. This case of Dr. Lloyd's is also interesting as serving to localise the so-called centre controlling the flow of urine to the vicinity of the nucleus of the sixth nerve. These cases of diabetes insipidus arising suddenly are, however, not always dependent upon a severe cerebral lesion, such as apparently occurred in this case, although frequently seen in cases of hemorrhage, etc., in the neighborhood of the fourth ventricle. Thus the writer has seen a case of aortic disease where suddenly one day well-marked diabetes insipidus came on and persisted for many weeks—in fact, as long as the patient was under observation, and in this case although it is possible that embolism of some small area of the medulla occurred, yet there were no general or local symptoms to point to any cerebral lesion, and still less to one of the pons or medulla.—*Practitioner.*

Nostrums the Bane of Pharmacy.

An extract from the address delivered by President John J. Teten before the Nebraska Association:

"The shelves of every pharmacy groan under the weight of patent and trade-marked nostrums that have had their brief life and are no more. The druggist who helped the manufacturer to introduce them can now enjoy the pleasure of seeing them sold at retail in department stores for less money than he can buy them from the manufacturer. Surely we druggists have reason to exclaim, in the language of Shakespeare, 'How sharper than a serpent's tooth it is to have a thankless child!' For much of this we druggists are to blame, but it is not too late to call a halt. The patent medicine men have slandered and vilified us until forbearance has ceased to be a virtue. They have not only accused us of substitution and fraud, but are trying to rob us of the right to sell our own preparations, even when called for. It seems to me that the time is now ripe when we members of this great pharmaceutical association should break away from these Egyptian taskmasters and proclaim our liberty. Let the manufacturer sell his goods through the dry goods stores while we pay closer attention to the manufacture of formulas that the physicians require and use. It is a slander on the medical profession to think for a moment that they cannot originate formulas to meet all cases that come under their care, and it is and should be the duty of every druggist to be able to prepare every formula that his physician may entrust to his care, gaining the confidence of the profession and public."—*Bul. Phar.*

A New Remedy for Diarrhea.—The intestinal antiseptic orphol (beta-naphtol-bismuth) is a remedy which gives the same good results as are obtained from the use of betanaphtol, without its drawbacks. It does not produce any burning sensation, and is easily administered, even to children. In the diarrhea of children it is especially serviceable. The dose varies from 1 to 5 gme. (15 to 75 grn.) per diem for children and infants. It may be given either with milk or honey. The noticeable good effects in these cases are that the stools lose their fetid odor, watery character, and green color. The dose for adults is from 5 to 10 gme. (75 to 150 grn.) a day. Good results have been obtained from its administration in the diarrhea of phthisis and typhoid fever in adults.—*Lancet-Clinic.*

Seborrhea of the Scalp.

℞ Resorcin	8 to 10	(℥ii. to 3v.)
Spt. rectificati .. acquae, aa	90	(aa ℥iii.)

Sig.: To be used as a lotion, once daily, after thorough washing of the head with green soap.—*Med. Rep.*

The drink problem on American railroads is a question of business, and without any sentiment. If the man who uses spirits in moderation or excess shows any incompetency, he is discharged at once. An engine was sent to the shop for repairs more frequently than usual; an inquiry showed that the engineer was a beer drinker. The inference was that beer had disturbed his judgment and made him more reckless, and he was discharged. Practical men are afraid to use spirits on the road for fear they will neglect some duty, and not act wisely in an emergency. Recently, a great railroad corporation gathered all the facts concerning the men, and the conditions of every accident which had occurred on their lines for five years. When tabulated, it appeared that 40 per cent. of all accidents were due altogether, or in part, to the failures of men who were drinking. That in 18 per cent. there was strong suspicion of similar cases, yet no clear proof. In one year over a million dollars' worth of property was destroyed by the failures of beer drinking engineers and switchmen. The companies' rules requiring temperate men for all positions are more rigorously enforced. Engineers find that, practically, they are unable to do good work while using spirits, even in small doses. The coolness and presence of mind so essential in their work is broken up by alcohol in any form.—*N. Y. Med. Times.*

Winternitz's attention was called to white birch leaves by a female patient, whose dropsy, due to kidney disease, was cured by them after every other diuretic had been tried in vain (*Centr. fur die Ges. Therapie,* xv, 3). Twenty-four hours after the first dose the secretion of urine becomes very abundant, and continues so long as the tea is taken. The albumen, epithelial cells, cylinders, etc., become less, and then disappear completely. It is worthy of note that, though the increase in the urinary secretion is so enormous, no symptoms of irritation of the renal parenchyma have been noticed in a single case. Winternitz recommends an infusion, made by macerating three ounces of the leaves in about a pint of hot water for two hours, to be drank in three portions during the day. The leaves must be gathered in the spring and dried in cool, airy rooms.—*Bul. Pharm.*

Mustard is very efficient deodorizer for the hands after working with anatomic material, and a well-known surgeon is recorded to have gone directly from a dissection to his operating room after such disinfection. It may be employed in any case when speedy and thorough disinfection of the hands is required; after *post-mortems*, removal of placental remains from the uterus, the opening of abscesses, the handling of gangrenous parts, etc. Not the least of its advantages is the fact that it is to be found in every household.—*N. Y. Med. Times.*

NEWS AND MISCELLANY.

In a paper entitled "Cod-Liver Oil a Time Tested Remedy," Webster Jay states. "The best and purest oil should be obtained, since the inferior oils are offensive in odor and taste. I thoroughly approve of a good emulsion when the microscope shows that it contains the *entire oil* in finely divided globules, and when I am satisfied that the percentage of oil claimed by the maker is present in the emulsion. Emulsification, moreover, forms a necessary step in the digestion of the fat, and the ready-made emulsion reduces the burden of labor devolving on the enfeebled digestive organs. The product which has given entire satisfaction in my practise, and to which I pin my confidence, is the Egg Emulsion of Cod-Liver Oil (P. D. & Co.). This product does not deteriorate, is most satisfactory in taste and flavor, and contains, by volume, full 40 per cent. of the entire oil. The absence of gum arabic, Irish moss, or the other emulsifying agents commonly used, is assuredly not the least of its advantages."

An English lady in making a cake lost her diamond ring in the dough, but did not discover the loss until the baking was complete. Rather than sacrifice her production or run the risk of having a guest swallow the ring, she sent the cake to an X-ray studio. The ring being located by the shadowgraph without spoiling the form of the cake, extraction was readily accomplished. —*Am. X-Ray Journal.*

Colorado has already fulfilled the pledge for a $2,000 contribution to the Rush Monument Fund, made by Dr. Graham at the meeting of the American Medical Association at Philadelphia. At the meeting of the State Medical Society, June 15, the full sum pledged by Dr. Graham was immediately raised by individual subscriptions offered most generously and with great enthusiasm.

The news comes from Baltimore that a decision was handed down in the United States Circuit Court by Judge Goff, by which the Johns Hopkins University and other holders of Baltimore and Ohio stock are declared not preferred creditors. If this decision is upheld in the Supreme Court, the University will lose about $50,000 of its annual income.—*Med. News.*

The British Medical Association will hold its sixty-fifth annual session this year in Montreal, August 31 and September 1, 2 and 3. The three principal addresses will be the one on Medicine, by Dr. William Osler, of Baltimore; on Surgery, by William Mitchel Banks, F. R. C. S., of England; and on Public Medicine, by Dr. Hermann M. Briggs of New York.

A case was recently tried in Birmingham, Eng., to decide whether a ham which was offered for sale as an English ham was really what is was represented to be. A point in the case was that the ham in question bore three hairs growing from a single root, and this was put forward as evidence that the ham must be American. It was shown by the defence, however, that three hairs growing from one root is a characteristic of the Berkshire breed of pigs, although not entirely confined to these. As the "three hairs" proof was the only evidence offered to show that the ham was American, this was considered too weak a support, and the case was dismissed.—*Med. News.*

Antipyrin and tannin rubbed together produce a sticky compound very useful as a styptic. It may be applied with a sponge. —*Med. Record.*

Of the entire Atlantic seaboard, the shores of Southern New Jersey afford the richest opportunities for study in marine biology. So it was considered by that foremost of American naturalists, the late Joseph Leidy, and Dr. C. S. Dolley, whose relations to the great scientist were practically those of a foster son, essayed to establish in that locality a laboratory similar to the marine biological station of Naples. The effort was successfully inaugurated, and through the enterprise of public spirited citizens of Sea Isle City, a well-equipped laboratory was established at that point. Under its founders' administration the institution flourished amazingly. Notable scientific discoveries and experimental research of great commercial importance early brought the station into prominence, but success was its undoing. Projected on broad and independent lines, it was designed to afford facilities for advanced biologic investigation and not to serve as a scientific kindergarten. Unfortunately the body corporate betrayed its trust, surrendering independence in the attempt to observe the interests of a prominent university. But the inspiring genius was not at the disposal of the body corporate, and, deprived of intellect and energy, nothing remains but the fast decaying plant which marks a witless outrage upon science.

The University Marine Biologic laboratory was an incident in the history of the locality. Nothing else has been lost of its superior advantages for scientific or other purposes. Sea Isle City is a favorite resort for those in search of rest, recreation and recuperation and especially for such as find pleasure in gunning, fishing and open-air life. Since the completion of the South Jersey railroad it has become easily accessible, the run from Philadelphia being made in about one hundred minutes. The placing of such a health-giving area within easy reach is benefit whose results will doubtless become patent in the higher health average of the urban population tributary to it.